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NEWS SUMMARY

GENERAL BUSINESS

Danish Grocery refusal starts air row
The British Government has withdrawn permission for Scandinavian Airlines System to operate two routes from today in retaliation for the Danish authorities' refusal to allow British Midlands to open a route between Birmingham and Copenhagen.

Grocery bill rise slows to 8.7%
GROCERY bills increased again this month, but the inflationary trend has continued to ease.

Prison mutiny
Spanish police firing smoke bombs and rubber bullets quelled an eight-hour riot at Barreloja cell by inmates demanding that the amnesty for political prisoners be extended to them.

CO-OPERATIVE Wholesale Society boosted its sales by 11.4 per cent to £165.5m in the first six months of the year. Page 6

Abadan blast
Five workers were killed and 20 injured in an explosion at Iran's only oil refinery in Abadan.

FIREMEN'S leaders, pressing their 30 per cent pay claim, have given warning that fire services will be severely disrupted if any attempt is made to impose a settlement similar to the one in dispute with the police—a 10 per cent rise and an inquiry into their pay structure. Page 8

Car bomb kills
Salvo police think that a car bomb which killed a man outside a Tunisian garage which sells West German vehicles had been placed in an attempt at the death of the leader of the Organisation for the Liberation of Tunisia.

PORT employers and dockers on the U.S. East Coast are embarking on fresh talks to try to settle the month-long strike which has led to container shipping chaos. Page 10

Man dies in race
Mr Piers Forester, a professional motorcyclist and former royal escort, died in a Sicilian hospital after falling from his machine and hitting a steel protective barrier during an international race at Broads Hatch.

BRITISH OXYGEN strike leaders are expected to meet in London today to discuss a new management initiative. Union officials say that the company is prepared to improve its pay offer. A major break in industry's life-line. Page 31

Tory health plan
Prescription charges should be raised suggested Mr Patrick Jenkin, Tory spokesman on social services. And patients might pay towards their keep in hospital in help finance the National Health Service.

ITALIAN Prime Minister, Sig. Andreotti, has bowed to trade union pressure and vetoed the sale of the State-controlled civil engineering company, Condotte d'Acqua, to a consortium of Texan banks. Page 36

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Hyde Guidelines agreement is expected today

By MICHAEL LAFFERTY

FINAL AGREEMENT to support the new inflation accounting initiative known as the Hyde Guidelines is expected from the accounting bodies and the Stock Exchange today.

The Confederation of British Industry, which earlier had expressed doubts about some features of the proposals, appears to have withdrawn its objections and is now supporting the new plan.

Mr. William Hyde, chief accountant of Oxford University and chairman of the group which prepared the proposals, said yesterday that the guidelines, which are intended to be adopted by the Institute of Chartered Accountants and the Institute of Cost Accountants (CCA), will be issued on Friday or early next week.

The guidelines call on quoted companies to publish a prominent note in their next accounts showing the effect of inflation on profits. They do not extend to the balance-sheet.

Mr. Hyde's group was set up by the rule-making Accounting Standards Committee to salvage something from this mess. From the start, however, it was made clear that there would be no attempt to make its proposals binding or applicable to any but the largest companies.

The outcome is something new to the language of accounting—although the company as an isolated entity has incurred all the first two costs, in terms of its shareholders it has incurred only that proportion of the costs which is financed by equity capital.

These are not obligatory in whole or part of any company. At the same time, they will almost certainly have strong support from the Stock Exchange as well as the CBI and the leading accounting bodies.

They point out, however, that if the Government wished companies to go into unlisted markets, it must lessen the financial risk.

The scheme, to be operated by the British Overseas Trade Board, would achieve this because for small- and medium-sized concerns there will be loans of 50 per cent of the eligible costs of a market venture, which will be repaid from receipts from sales.

If sales did not materialise, the company and the scheme would share the loss. For this the company would pay the scheme an annual premium.

Neddy will want to know when the scheme can be brought into effect.

Details are being worked out by the British Overseas Trade Board with working parties and other industry representatives.

Discussion of Mr. Healey's mini-Budget is not officially on the agenda, but it is unlikely that members will fail to discuss some of the implications with the Chancellor, who is expected to be present.

There is to be a NEDO discussion paper on the recent OECD study by international economists entitled 'Towards full employment and price stability'.

Dell to detail exports scheme

By Kenneth Gooding, Industrial Correspondent

DETAILS of the scheme by which the Government hopes to help smaller companies develop new export markets will be given by Mr. Edmund Dell, Secretary for Trade, when the National Economic Development Council meets on Wednesday.

Several of the sector working parties involved in the industrial strategy programme have set themselves the target of improving export performance.

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It will discuss points brought out by the study affecting the U.K., in particular productivity, inflation, unemployment, investment and future rates of exchange.

Then there will be a discussion of the report by Sir Frederick Warner, which criticised the Government and Whitehall for allowing confusion in the field of standards and specifications in engineering.

Mr. Roy Hattersley, Secretary for Prices and Consumer Protection, will detail progress made in his department in achieving aims of the Warner report.

He argued that there was not yet a conflict between interest rate, monetary and exchange rate policies.

If the Government does decide to allow a rise in the rate, it faces the choice of allowing a completely free float or trying to peg the rate at a higher level to restore stability.

The danger of the latter course is that pressure might again develop against such a new interventionist level once it became known. The alternative is some form of "dirty float" with disguised intervention levels.

The recent heavy inflows of foreign currency reflect not only speculative "hot money" demand for sterling attracted by the possibility of appreciation but also the impact of the turnaround in the current account.

Carter's men give warning on S. Africa

By JUREK MARTIN WASHINGTON, Oct. 30.

TWO SENIOR members of the Carter Administration made clear today that if South Africa did not make internal social changes, the U.S. believed that could turn into an international ideological confrontation on the continent.

Dr. Zbigniew Brzezinski, President Carter's National Security Adviser, and Mr. Andrew Young, U.S. Ambassador to the U.N., said in separate television interviews that the Soviet Union might be tempted to become more involved in southern Africa.

Mr. Young specifically said that if South Africa were to explode a nuclear device—and he promises that this was not the intention could not be trusted—Black neighbours might conclude that they had to acquire similar weapons "and they probably would."

Dr. Brzezinski said a combination of mounting urban violence inside South Africa and external pressures from the republic's Black neighbours could easily lead to some of the less-moderate Black nations seeking assistance in the form of military advisers from the Soviet Union or Cuba.

He stressed that he was not predicting that the Soviet Union, in particular, was itching to extend its influence in the area, "but we would like to avoid situations where they may be tempted to get involved."

Although he did not say so, he may also have been seeking to exploit what is seen here as South African ideological paranoia about "the Communist threat."

Both officials said that the U.S. expected South Africa to respond to the international pressures on it, such as President Carter's offer last week for a mandatory arms embargo.

Dr. Brzezinski said that he hoped South Africa would recognise that "the spirit of the times demands that internal accommodation has to come... and has to come fast enough."

The pace of change had to be fast enough to anticipate both international and domestic pressures.

Both men were critical of the practices of apartheid, but both denied that the U.S. was endeavouring to instruct South Africa in the precise nature of the internal reforms it ought to undertake.

He said that if the republic thought in terms of its own historic destiny, it would see that apartheid was untenable; but the U.S. did not expect "instant change."

Both men declined to be drawn into speculation on what additional measures the U.S. would take if South Africa did not respond.

President Carter had implied to reporters on Thursday that further action would be proper. Dr. Brzezinski said today however that "too many sanctions on too good a scale" might be unproductive.

On the question of nuclear supplies, Mr. Young said that in spite of his preference for an absolute embargo, he accepted that South Africa is subject to the international disciplines and safeguards that could be enforced if it were to sign the nuclear non-proliferation treaty.

While ruling out a complete disinvestment of U.S. interests in South Africa, Mr. Young was in no doubt that commercial pressure could be exercised to achieve a racially integrated economy.

U.S. trade with Nigeria was already more than three times that with South Africa, and he approved that the Nigerian Government was impressing, particularly on European companies, that they might have to make a choice between their enterprises in Nigeria and South Africa.

Standstill

By PETER RIDDELL, ECONOMICS CORRESPONDENT

THE GOVERNMENT is facing increasing pressure for an early decision on whether to allow a rise in the sterling exchange rate in response to continuing heavy inflows of foreign currency.

There is apparently a growing, though reluctant, recognition that raising the rate and an appreciation is the only remaining option if both the rate of inflation is to be reduced and the threat to the monetary targets removed.

This position has become clearer following last Wednesday's mini-Budget statement by Mr. Denis Healey, the Chancellor, which included no significant steps to rein in the inflows and specifically ruled out for the time being the option of loosening controls on foreign portfolio investment overseas.

The pressures on the Government will be highlighted on Wednesday by the publication of the official reserve figures for this month which are widely expected to show a rise at least as large as the £2.3bn. increase in the previous month, and possibly even larger.

The exact figure will depend on the extent of forward operations to delay receipts but the reserves total is likely to approach, or even slightly exceed, £20bn. compared with \$4.1bn. at the beginning of the year.

The underlying inflow in the last four months is probably at least \$7bn. and there has been increasing concern in Whitehall about the impact of this on the domestic monetary position.

The inflows were absorbed by gilt-edged sales until two months ago, but the growth of the money supply accelerated sharply last month.

There are increasing fears that the figures for the October banking month will result in a rate of growth slightly above the 9 to 10 per cent target range for the current financial year.

He argued that there was not yet a conflict between interest rate, monetary and exchange rate policies.

If the Government does decide to allow a rise in the rate, it faces the choice of allowing a completely free float or trying to peg the rate at a higher level to restore stability.

The danger of the latter course is that pressure might again develop against such a new interventionist level once it became known. The alternative is some form of "dirty float" with disguised intervention levels.

The recent heavy inflows of foreign currency reflect not only speculative "hot money" demand for sterling attracted by the possibility of appreciation but also the impact of the turnaround in the current account.

On a seasonally adjusted basis, the Treasury expects a switch from a deficit of £1bn. in the first half of this year to a surplus of £1bn. in the second half.

Pressure rises for early exchange rate decision

By PETER RIDDELL, ECONOMICS CORRESPONDENT

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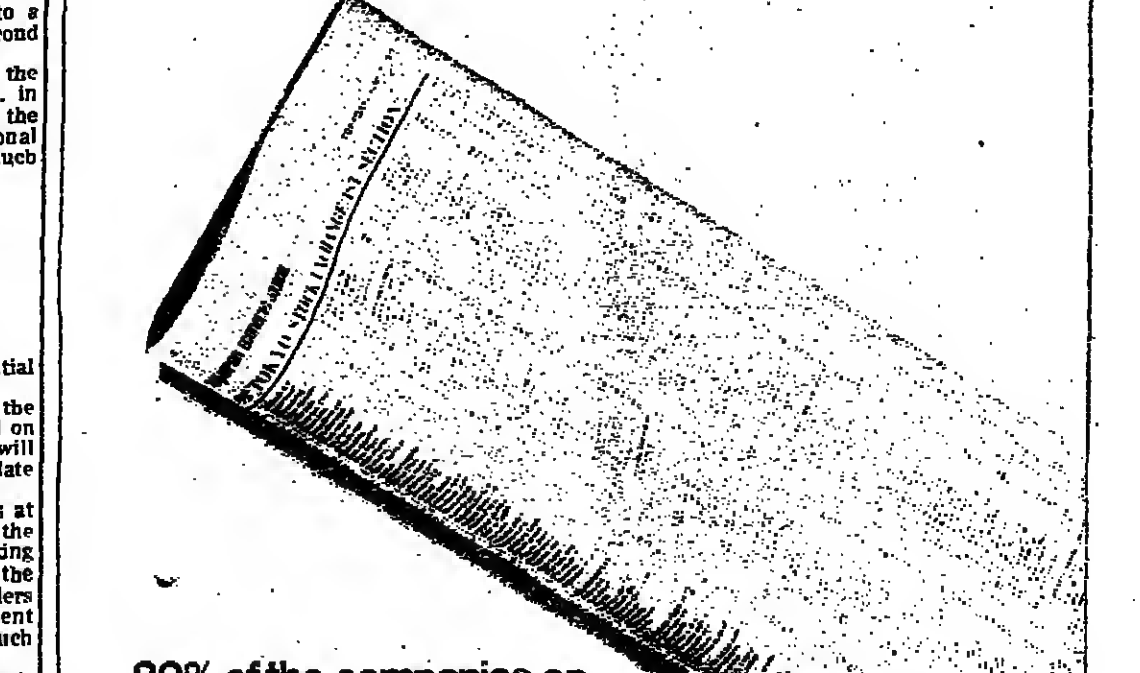
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LOMBARD

Fussing about structure

BY GEOFFREY OWEN

NOT CONTENT with asking Mr. Harold Lever to find ways of helping small business, the Prime Minister has now begun to question the value of mergers...

Stability
Just when a consensus on these matters seemed to be emerging—and with it the prospect of a change in merger policy...

Objective
Maintaining competition must certainly be the primary objective of merger policy, but should it be the only one? Such an approach has the advantage of simplicity...

misunderstanding of the real world. The efforts of Government to manipulate or restructure a system as complex and subtle as competitive private industry are as likely to fail as would the efforts of a group of curious and playful children to repair a modern chronometer.

Delusions of dominance; Hobart Paper, Institute of Economic Affairs, £1.00.

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THE WEEK IN THE COURTS

Judges shun role as EEC harmonisers

BY JUSTINIAN

THE TREATY of Rome obliges member states of the EEC to harmonise their laws in the economic sphere. The question is whether the goal of harmony is to be attained through the courts of the nine members as well as through their respective Parliaments?

Damages
"Freight pre-paid" bills of lading, which provided that the Italian carrier in Genoa had exclusive jurisdiction to determine any dispute between the parties, were issued to the shippers. The bills of lading were transferred to the cargo-owners in Saudi Arabia, who had paid in advance for the price of the goods, the freight for the voyage and the insurance to cover it.

Attachment
In a trilogy of recent cases in our courts a defendant has been held to be amenable to the jurisdiction of the English court quite independently of the claim for an injunction. The court has ordered the foreign defendant to serve writs on a foreign defendant by his assets from this country.

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The exercise of determining what the foreign laws are is to be done in a complex and costly study. Courts after all are not in so good a position as legislators for undertaking a comprehensive review of the international implications of any jurisdictional decision.

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Howe's return already begins to bring results

SOCCER

BY TREVOR BAILEY

DESPIITE an uneven, ragged performance against Birmingham, when they had to wait until five minutes from the end to obtain the equaliser, Arsenal probably possess greater potential than any other London club.

The return of Don Howe as coach to the team he guided to the double in 1971 already is beginning to pay dividends. Birmingham's superbly executed goal, a first-time chip into space from Francis to Bertshaw, who slipped a defender and hit a perfect left-foot shot into the top of the net, was only the second goal that the Gunners' well-organised back four, with Jennings behind, had conceded at home this season.

Both sides concentrated on attack, there was not one bad foul, and for once I did not hear any terrace obscenity. Up front, neither Macdonald nor Stapleton were able to make any impression on the Birmingham defence, even though it had to be reorganised several times during the first half.

Birmingham employed a conventional 4-4-2 line-up, Arsenal, but with one important variation: Francis and Chin, their two lead forwards who have developed a fine understanding, operated much further apart than most dual spearheads and attacked on a broader front which automatically stretched the opposing defence and created gaps for colleagues coming from behind.

On this display, Francis, with his speed, art and imagination, looked the complete forward in England—a genuine international. He should play a major part in England's next World Cup campaign.

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Oxford show spirit in defeat

RUGBY UNION

BY PETER...

VICTORY does not come easily in county rugby, even on county match days, and so it says much for Oxford University's spirit that they lost only 9-4 on Saturday.

White did some good work, but the defence was that none of them really knew the defensive to take in given situations, often they were all planned a ruck or maul.

The impressive aspect of the three-quarter play was willingness to counter-attack, even within their 22 metres. It was in fact the only way in which the forwards were able to make any impression on the opposition.

Round-world yachts sail east

YACHTING

BY ALEC BELBY

THE 15 yachts which set out from Cape Town last Tuesday on the second leg of the Whitbread Round the World Race to Auckland, New Zealand, are now well into the Roaring Forties and are making the long haul eastwards.

Robinson and his crew are both large men and they are both strong and they are both fast. Robinson is a former international cricketer and he is a very good sailor.

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Bright future for Boldboy

RACING

BY DOMINIC WIGAN

OF THE many horses owned by Lady Beaverbrook, few will have given her greater pleasure than Boldboy, who, by landing the Group Two Verduyn Sprint Cup at Haydock on Saturday, brought his aggregate of prize money to just over £90,000.

But perhaps the best bet of the afternoon is Showpiece in the November Apprentices' Handicap (3.45). This colt, by Daring Display, formerly trained by Major W. Hearn, and now with D. Keith at Winchester, ran really well when third in the Shuffing and Baldin at Newbury the other day, and these two finished first and second again in a competitive handicap at Newmarket on Saturday.

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TV Radio

- 9.30 a.m. For Schools, Colleges, 10.45 You and Me, 11.00 For Schools, Colleges, 12.45 p.m. News, 1.00 Pebble Mill, 1.45 Chigley, 2.01 For Schools, Colleges, 3.15 Songs of Praise, 3.35 Regional News for England (except London), 3.55 Play School, 4.30 News, 4.40 The Wombles, 4.45 Jackanory, 4.40 Emu's Broadcasting Company (BBC1), 5.05 John Craven's Newsround, 5.10 Blue Peter, 5.40 News, 5.55 Nationwide (London and South East only), 6.20 Nationwide, 6.50 Are You Being Served?, 7.20 The Rockford Files.

BBC 1

- 9.10 Panorama, 9.40 News, 9.55 The Monday film: 'Hickey and Boggs', starring Billy Connolly, 11.15 Tonight, 11.55 Weather/Regional News, All Regions as BBC1 except at the following times: Wales—1.45-2.00 p.m. Pill Pala, 5.55-6.20 Wales Today, 6.50 Heddlu, 7.10-8.10 Royal Heritage, 11.55 News for Wales, 11.57 Snooker: Welsh Professional Championship, 12.12 a.m. Weather for Wales, Scotland—10.00-10.20 a.m. For Schools (Around Scotland), 5.55-6.20 p.m. Reporting Scotland, 11.15 Public Account, 11.50 p.m. News and Weather for Scotland, Northern Ireland—1.35-3.55 a.m. Northern Ireland News, 5.45-6.20 p.m. Scene around Six, 11.55 News and Weather for Northern Ireland, England—5.55-6.20 Look East (Norwich), Look North (Leeds, Manchester), Midlands Today (Birmingham), Points West (Bristol), South Today (Southampton), Spotlight South West (Plymouth).

BBC 2

- 10.00 a.m. The Role of the Nurse, 11.00 Play School, 2.30 p.m. WorkTalk, 2.40 The Caterers, 3.30 Signs of Trouble, 4.00 Making Toys, 7.00 News on 2 Headlines with subtitles, 7.05 Volunteers, 7.30 Newday, 8.10 Des O'Connor To-night, 9.00 Drama 2, 9.50 The Long Search, 10.10 Late News on 2, 10.30 Open Door, 11.20 The Light of Experience, 11.35 String Quartet Op. 135 by Beethoven played by the Amadeus Quartet.

ANGLIA

- 10.31 a.m. Survival, 12.30 p.m. Out of Town, 1.25 Angus News, 2.00 Home Affairs, 2.10 Daily News, 2.15 World, 3.15 University Challenge, 6.00 About Anglia, 6.30 Top Man's Mansions, 8.15 Saturday Music, 8.30 a.m. Reflections, 12.30 p.m. Today's People, 1.30 ATV National News, 2.15 University Challenge, 6.00 AT, 6.30 News, 6.50 AT, 11.45 Something Different.

ATV

- 12.30 p.m. Today's People, 1.30 ATV National News, 2.15 University Challenge, 6.00 AT, 6.30 News, 6.50 AT, 11.45 Something Different.

BORDER

- 12.30 p.m. Today's People, 1.30 ATV National News, 2.15 University Challenge, 6.00 AT, 6.30 News, 6.50 AT, 11.45 Something Different.

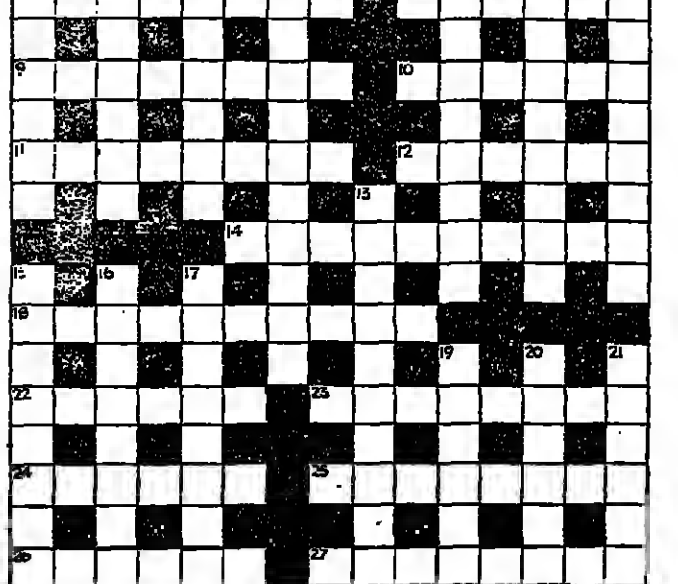
CHANNEL

- 1.30 p.m. Channel Lunchtime News and Weather, 2.00 News, 2.15 University Challenge, 6.00 AT, 6.30 News, 6.50 AT, 11.45 Something Different.

GRAMPIAN

- 1.30 p.m. Channel Lunchtime News and Weather, 2.00 News, 2.15 University Challenge, 6.00 AT, 6.30 News, 6.50 AT, 11.45 Something Different.

F.T. CROSSWORD PUZZLE No. 3506



- ACROSS
1 Tube with jugsge container goes to puffer's resting place (4, 4)
5 Goal causes dissent (6)
9 Fit for a short time alas (8)
10 Cat employing a doctor (6)
11 Contradiction in terms makes litany go differently (8)
12 Smoothly in score found by member at Ring (6)
14 Transmission links approach to house (5, 5)
18 Make derivative gesture to hind-like corner (4, 1, 5)
22 Disapproving baby-sitter? (6)
23 Point to the genuine heavenly... (8)
24 ...entry directions that belong essentially... (6)
25 ...to no single person taking part in another match (6)
26 Must ten get a move on? (6)
27 Keen fan joins one party in the doe course (8)
DOWN
1 Tropical fruit two feet long (6)
2 Taste what friend bad for dinner (6)
3 You don't say about a confederate (6)
4 Supervisor makes onslaught on indicator (6, 4)
6 Supporters of shelved literature 14, 41
7 Delighted to find City district not moving (8)
8 Act concerning volume of business (8)
13 Youngster placed during interval in music (6, 5)
15 Recently sea-food gets call for silence (8)
16 Plant grown in a tin like this? (8)
17 Unconcerned though with trouble available (6)
19 Assign for duty in particular (6)
20 Portray newsmen upset by ancient Briton (6)
21 Craftsman often out on the tiles (6)
The solution of last Saturday's prize puzzle will be published with names of winners next Saturday.

LONDON

- 9.30 a.m. Schools Programmes, 12.10 Chorlton and the Wheelies, 12.15 News, 1.00 News, 1.15 The Flintstones, 1.30 News, 1.45 News, 1.55 News, 2.00 News, 2.15 News, 2.30 News, 2.45 News, 3.00 News, 3.15 News, 3.30 News, 3.45 News, 4.00 News, 4.15 News, 4.30 News, 4.45 News, 5.00 News, 5.15 News, 5.30 News, 5.45 News, 6.00 News, 6.15 News, 6.30 News, 6.45 News, 7.00 News, 7.15 News, 7.30 News, 7.45 News, 8.00 News, 8.15 News, 8.30 News, 8.45 News, 9.00 News, 9.15 News, 9.30 News, 9.45 News, 10.00 News, 10.15 News, 10.30 News, 10.45 News, 11.00 News, 11.15 News, 11.30 News, 11.45 News, 12.00 News, 12.15 News, 12.30 News, 12.45 News, 1.00 News, 1.15 News, 1.30 News, 1.45 News, 2.00 News, 2.15 News, 2.30 News, 2.45 News, 3.00 News, 3.15 News, 3.30 News, 3.45 News, 4.00 News, 4.15 News, 4.30 News, 4.45 News, 5.00 News, 5.15 News, 5.30 News, 5.45 News, 6.00 News, 6.15 News, 6.30 News, 6.45 News, 7.00 News, 7.15 News, 7.30 News, 7.45 News, 8.00 News, 8.15 News, 8.30 News, 8.45 News, 9.00 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Orfeo ed Euridice

by ELIZABETH FORBES

The Wexford Festival rarely establishes operatic masterpieces, but Thomson Smillie, now in his fourth season as artistic director, has been relatively bold in this respect and Britten's *The Turn of the Screw* was the chief success of last year's festival. *Orfeo ed Euridice* has been established as a masterpiece for well over two centuries, and while Gluck's opera is not the chief success of 1977—award my *palme d'or* jointly to *Herodias* and *La serva padrona*, already noticed—it has certainly been the focal talking point of this year's repertory.

The avowed intention of Wolf Siegfried Wagner's production is to shock, and though the Wexford audience—apart from certain critics—do not seem to be in the least shocked, Mr. Wagner certainly succeeds in startling them into fresh appraisal of a work too easily labelled with the safe title of a classic. Dacre Punt's setting, a *rompe-neil* effect of mirrors and baroque architectural engravings scrupulously drawn by Paul Draper, is matched by Alex Reid's ravishingly pretty 18th-century costumes; the chorus, banished back stage, is represented by a small group of dancers from the Irish Ballet, whose movement is mainly stylised.

So far, so conventional: but Messrs. Wagner and Punt have introduced a symbol, usually wholly modern by implication, into each scene: Euridice's remains—there has obviously been an autopsy—float in a glass tank of formaldehyde; a giant hypodermic syringe hangs menacingly over the recumbent Orpheus as the Furies gather round him; two dancers, naked but for body stockings, invade the pastoral Elysian Fields; a huge metronome ceases its regular beat the instant that Orpheus turns to look at Euridice; a sofa, fashioned from a non-tronous, scarlet-lipped mouth

no awards for guessing what that symbolise—accommodates the reunited pair at the end. None of these deliberate challenges: intruder and Punt have using the original 1762 Vienna edition, shorter and plainer but more dramatic than the later Paris version. Jane Glover conducts a stylish performance. The RTE Symphony Orchestra and the invisible Festival Chorus, perhaps exhausted from their triumphant efforts in *Herodias*, are in slightly subdued form: the dancers execute Domy Reiter-Scheffer's apt choreography with elegance. Kevin Smith, a counter-tenor Orpheus, fills the resonant



Kevin Smith in a scene from *Orfeo ed Euridice*

material, but some Wolf songs, in particular "Begegnung", "Meeting" and "Das verlassene Madgelein" (The deserted servant-girl, were expressively interpreted. Ravel's *Sinfonies* naturally brought the singer's vivid dramatic talents into play, but it was Grieg's touching *Haugtussa* cycle (The mountain maid) that most fully engaged her sympathies—as well as the listener's—and with which she identified most strongly. Sibyllus's "Var det en Dröm?" (Was it a dream?), sung in Swedish, made one wish that Miss Meyer had included more songs in her native language, Swedish.

Korunk Zenéje—1

Hungarian Contemporary Music

by DOMINIC GILL

The days of Korunk Zenéje—Contemporary Music—in Budapest this autumn were reduced from twelve to eight, while the number of concerts during the period increased from 16 to 17. Such a concentration of musical events, almost Royal-like in its profusion, but still of unmistakable Magyar style and charm, marked its fourth anniversary of this important Hungarian festival town, after the initial tentative steps three years ago, when new music was included as a separate category in the Budapest Music Weeks for the first time, to a full-blown and impeccably organised celebration, worthy of comparison with any like-minded festival in Europe east or west. (Sad though that Britain, with all her traditions and resources, is unable, or sadder still, unwilling, to produce these days any kind of national festival of contemporary music at all.)

The products of Korunk Zenéje are still, as they should be, chiefly home-grown. The festival's first concert, given by the Budapest Chamber Ensemble under András Mihály, framed by Wehern and Stravinsky, offered two contrasting first performances of works by the older and the younger generations. *Hullámok* (Waves 1 & 2) by István Matúz (1933) combined two short pieces: the first for vibraphone and soprano, the second for cimbalom, flute and guitar; a quick, confident essay in the post-war western European idiom, not specially remarkable quality—but with quicksilver here by a brief appearance of the wonderful Márta Fehér. Miss Fehér is not merely the greatest cimbalom player in the world, competing in a fairly slim field; a musician who charges every sound that she draws from her unusual instrument with extraordinary force, electrifying tension. Without her, suspect, Lina's waves would have seemed no more than ripples on a glassy stream.

The younger generation in Mihály's programme was represented by Balázs Szonyogh (b. 1954), whose 16-minute *Variations for chamber ensemble* made a mixed impression: an exhilarating not-quite-serial work from Stravinsky to Big Band Swing, shot through with some sensitive lyrical-wistful instrumental weaving, but also curiously indecisive, undisciplined in shape and direction. One sensed an interesting young talent, with a fine ear for instrumental combination, as yet without centre, still searching for his own individual voice.

I first noted Szonyogh at the Korunk Zenéje last year in a lively concert entitled "We Present our Young Composers." This year the same event, presented by the youth section of the Hungarian Musicians' Association, found more disappointing. *Variations II* by László Martos, for flute, cello and percussion, accompanied throughout

by a metronomic pok-pok tone recorded on tape, contained the seeds of an interesting structural idea; but the effect in execution was almost wholly vacuous, a "good-idea piece" worked without any kind of grip or focus, and at 13 minutes, far too long for sense or comfort. A *Bolton Vireon and Rondosa* by Iván Székely for soprano, flute, horn and viola—and a John Donne Sonnet setting for soprano, piano and viola—were likewise both prime examples of student note-spinning which I recognised keenly from my own RAM days: precisely the kind of elaborate, baseless confection which professors everywhere encourage and admire. A short, neat essay for a capella SATB choir by András Feher called *Barokk Song* stood out alone from the student list—not so much for its originality, as for its genuinely firm and consistent working, and its imaginative manipulation of derivative techniques (chiefly Ligeti-like part-clusters and slow glissandi).

Another afternoon concert in the hall of the Liszt Academy the previous day, devoted mainly to the work of younger composers, was more inspiring. The programme was shared by the pianist Adam Fellegi and the flautist István Matúz—two of the many superb young instrumentalists still in their twenties or early thirties but already outstanding artists of world

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rank, who have emerged from the Budapest Academy in the last decade. After hearing Matúz last year, and especially his performance at the final concert of his own new arrangement of Jolivet's *Cinq Inventions*, one of the climaxes of the festival called him without hesitating one of the finest flautists in Europe to-day of any age, young or old. This year, he confirmed that judgment. The account he gave of his own *Study No. 3* for solo flute was one of the most perfect performances of the week's programme, and one of the most exciting: a single 7-minute glissando, endlessly slow, taken without break in a single "circular" breath, the line as it ascended and descended, with all manner of overtones and partials deep chords, fluttering resonance.

In the same programme, Matúz also gave a brilliant crystalline account of *Cossonova's Dream* song by Brian Ferneyhough; and the first performance of an attractive new piece by László Dudray, *Streams No. 3*—reverted for four flute voices, one live, and three on tape. As the streams pass, the live voice, delicately amplified, picks out a pattern of slow bass-tones from the main current, a shimmering

Duke of York's Laburnum Grove by B. A. YOUNG



Honor Shepherd, Arthur Lowe and Deborah Watling

J. B. Priestley's veteran comedy is a sturdy old repertory piece, and deservedly so. Its slight story is beautifully planned. In the first act, George Radfern, the archetypal suburban bore, announces to the family parasites that he is not just coming in the paper trade, he is head of an international gang of forgers. Throughout most of the second act he is away, like Hamlet or Macbeth (no great writer should be too proud to take hints from a master), and we have much hope of solving his case—watches round and round in the third act there is a confrontation with the police as riveting as *Mercutio's* speech tense as that in *Punnett*. The conclusion is sufficiently unexpected, even if it is a snub to law

where Mr. Goldie has allowed too much farcical byplay, such as Simon Merrick's juggling with his suitcases. Sam Kydd's comic exit through the greenhouse, the romantic young couple Elsie and Harold are radiant of the "thirties in the hands of Deborah Watling and Rob Edwards, though not very romantic. Simon Merrick and Honor Shepherd are the paratitic uncle and aunt. Joan Cooper is George's wife, as square as the family, and George to be, and Dermot Walsh plays the Inspector. The sitting-room in Laburnum Grove, Shooters Green, N., should be.

Westminster Cathedral

Christus by RONALD CRICHTON

Liszt's oratorio *Christus*, the largest of his choral works, brought to a splendid climax the profusion of musical events big, small, and various, that during the past six weeks have made up the Liszt Festival of London. The musical public, hard to please now for lesser things, still has a nose for real occasions. Westminster Cathedral was well filled on Friday evening for the performance given by the Liszt Festival Chorus, St. Angela's School Choir, the Royal Philharmonic Orchestra, and four distinguished soloists, conducted by Brian Wright. Dust may settle on the memory of some of the other Festival activities, but this event will undoubtedly be remembered.

Christus was written, over a number of years, in Liszt's middle life, in Weimar and Rome. The greater part dates from the early and middle 1860s. The first complete performance (separate sections had already been heard in various places) was given in Weimar under Liszt's direction in 1873. Like many of his works, major and minor, it has been sadly neglected. Friday's performance was apparently the first in this country—though, indeed, both of oratorio in Liszt's own century—thought surely isolated numbers must have been done here?

The question of parts and whole throws light on the nature of the work and provides a possible explanation for neglect. Liszt described *Christus* as his "musical Will and testament." The Latin text, assembled by the composer from mainly Biblical sources, concentrates on episodes in the life of Jesus. The music forms a kind of anthology of Liszt's less profane aspects, the Franciscan side of his nature that co-existed with a handsome, full-voiced soprano Plaintiff (Elizabeth Price), and as Defendant, useful light (Keith Hoare). Further performances to-night and to-morrow with an alternative cast for Trial by Jury.

In fact the length of *Christus* has been exaggerated. Even in the uncut Hungarian recording (six sides) there is less than three hours music. On Friday, Brian Wright used the cuts made by Liszt for the 1973 Weimar performance (these are not given in the Eulenburg study score but were apparently published in an appendix to the full score of 1874). Necessary they may be for practical reasons, but also slightly prolix pastoral writing goes, so does much of the hitingly chromatic "Tristis est anima mea"; the proportions of the *March of the Three Kings* are roughly handled. The cuts were helpfully listed on the programme sheet handed out in the cathedral. The pages not given on Friday can fortunately be heard in the recording.

Mr. Wright's reading, though less polished, and no doubt much more quickly prepared was more lively and committed than the

Prof C NORTHCOTE PARKINSON and NIGEL ROWE
will sign copies of their new book **COMMUNICATE** Parkinson's Formula for Business Survival at the **BARBICAN BUSINESS BOOK CENTRE**
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The Results for 1977

	Year to 30th April 1977	Year to 30th April 1976
Group Turnover	£24,246	£22,480
Profit before tax	925	732
Shareholders' Funds	3,674	3,367
Net Dividend per share	1.938p	1.735p
Dividend cover	3.3	3.0
Earnings per share	6.4p	5.2p

If you would like a copy of the Report and Accounts, please write to: The Secretary, 4112 Marybone, Liverpool, L3 2BY.

Sir Jack Lyons Theatre

Tobermory by RONALD CRICHTON

The new theatre for the Opera Class of the Royal Academy of Music was opened on Wednesday by the RAM's President, Princess Alice, Duchess of Gloucester. The four year wait since the cramped little stage and auditorium formerly on the site of Marlborough Row were pulled down, though it may have seemed endless to those most concerned, has been rewarded. The stage is now larger than the whole of the old theatre put together. The pleasant, small auditorium seating nearly 300, is simply but warmly decorated in grey and cyclamen pink—concrete there may be but it is neither seen nor felt. The sound, from a seat in the fifth row, was clear and well-balanced. There is not much extra resonance to help the voices, but they were not fighting. One belated what one heard.

For the occasion, John Gardner had written one-act operatic version with libretto by Gavin Ewart of the short story *Tobermory* by "Saki"—the one about the family cat enticed by a basket of food with powers of communication which he uses to reveal indiscreet secrets about a house-party. I haven't read the story, but judging from what better educated colleagues tell me, the ending has been considerably altered. The inconvenient cat, having survived the efforts of one of the house guests to poison him, is conveniently destroyed off-stage by a marauding rival. Gardner has written some excellent scenes—one before the zoologist's entrance, another after the cat Tobermory's off-stage revelations, and a quiet-epilogue—which show a sure touch for light comedy in music. There are also two short instrumental interludes to mark the passing of time, which do precisely that. Less happy at a first hearing was the setting of the sub-Coward, twenty-ish dialogue, heard for young singers to do naturally (and for that reason, of course, excellent training). I suspect that the duet for Lady Blemley and Bertie is one of the good things in the score, though it did not quite make its effect on Wednesday. Stenart Bedford conducted, Dennis Maundrell presided. The circular seat in the middle of the stage was an unnecessary obstacle.

Festival Hall London Bach Society

On Friday Paul Steinitz conducted the London Bach Society and his Steinitz Bach Players, with the Bulmershe Girls' Choir, in Bach's B minor Mass. Occasionally the chorus overbalanced the modest (though expert) orchestra, out the performance had the usual virtues of Dr. Steinitz's work: intelligent clarity, light-footed tempo, nothing grandiose or monumental. The "Sanctus" was a lesson in how to achieve breadth of scale without pomp. At the extremes of dynamics, there was some loss of focus—the "Gloria" made a joyful but confused theatrical pianissimo for the "Quotidians" and the "Cruentatus" was contrapuntal impasse. A certain rigidity in Dr. Steinitz's beat made for awkward tempo-changes, like the lurch into "Et in terra pax," but generally his tidy intentions were happily realised. The female soloists were

passages that mars many professional operetta performances. But why did the programme describe Gilbert's Counsel for the Plaintiff as "for the Defendant"? The triple bill was rightly designed to give a chance to as many students as possible. A few names must be mentioned. In the Purcell, the severest test of good singing, the counter-tenor, Philip Newton, showed real distinction and showed it again as the off-stage cat in *Tobermory*, but coaching had evidently been brought in. In the Gardner piece, we heard a strong mezzo, Clare Moll, as the governess. The Sullivan brought a lively, verbally dexterous Judge (Richard Stuart), a handsome, full-voiced soprano Plaintiff (Elizabeth Price), and as Defendant, useful light (Keith Hoare). Further performances to-night and to-morrow with an alternative cast for Trial by Jury.

From Today Air Mauritius flies its own colours
Linking Europe, Africa and Asia with Mauritius the most cosmopolitan island in the sun.

Air Mauritius adds pleasure to flying by providing the most cosmopolitan in-flight service. Their hostesses, all Mauritian nationals—beautiful, charming, friendly and efficient—represent a kaleidoscope of races, colours, cultures and creeds. The tight crew equals the best in the world. The menu offers a variety of European and exotic oriental foods. Air Mauritius will be the most cosmopolitan way London Nairobi Mauritius - Mauritius Bombay.

to fly to Nairobi and Mauritius and from Mauritius to Bombay. It will also be the fastest way to fly to Mauritius. Air Mauritius Boeing 707 takes off on its inaugural flight from London, Heathrow, today at 18.35 hours. Get your travel agent to fly you Air Mauritius in future.

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As cosmopolitan as our island in the sun
General Sales Agents: British Airways

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OVERSEAS NEWS

Ban on Scandinavia flights by U.K. angers Denmark

COPENHAGEN, Oct. 30. The Danish Transport Minister, Mr. Kjeld Olesen, today accused Britain of trying to blackmail Denmark into allowing new British flights to Copenhagen.

Schleyer tape critical of Bonn security

Political controversy erupted this week-end over the contents of a hitherto undisclosed tape recording made by the late industrialist Dr. Hanns-Martin Schleyer soon after his capture by terrorists.

THE SEARCH FOR A RHODESIAN SETTLEMENT Mugabe objects to Carver

A RHODESIAN nationalist leader said today that his guerrilla alliance did not accept the proposal of British Field Marshal Lord Carver, as an administrator of Rhodesia during a transition to black majority rule.

Austere Portugal budget

DETAILS of the 1978 Portuguese budget have now been published. Parliamentary debate on it is due to begin shortly.

Lithuanian disturbance

A Soviet dissident just returned from Lithuania said yesterday that local people chanting nationalist slogans clashed with police during a soccer match on October 10 between a Vilnius side and a Russian team, and spread after the game into nearby streets.

Two die in protests against Gandhi

TWO PEOPLE were killed in riots in Madras, capital of the southern State of Tamilnadu, when police fired on crowds demonstrating against Mrs. Indira Gandhi, the former Prime Minister, who is touring southern India.

THE MIDDLE EAST Israelis strike over floating of pound

MUCH UNCERTAINTY surrounds the implementation of the Likud Government's new economic policy, announced on Friday, which hinges on the floating of the Israeli pound and the liberalisation of foreign exchange controls.

Philippine referendum

The Philippine Legislative Advisory Council voted yesterday to call a national referendum on December 17 on whether President Ferdinand Marcos should continue to rule with a new constitution.

Argentine strikes

Normal train service was restored yesterday in Argentina after four days of wildcat strikes, but underground railways were still out of service and air-line personnel threatened further strike action.

Gen. Zia on tour

Gen. Zia-ul-Haq, left yesterday on a five-day tour of Middle East countries in what is taken here to be another attempt to acquire aid to bolster the ailing economy.

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You're going to need money when you're there. Australian money is more sensible to buy them here and take them with you. Win Thomas Cook you can. Just think what local currency travellers cheques can mean to you.



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Common sense, security and simplicity. That's Thomas Cook Travellers Cheques. A change for the better.

SOREC LIMITED (Incorporated in the Republic of South Africa) INTERIM REPORT. Following the merger of the company's former wholly owned subsidiary, Raud Selection Corporation Limited...

RAND MINES, LIMITED (Incorporated in the Republic of South Africa) PRESS ANNOUNCEMENT. Due to the expansion of operations in the mining division the directors of the four gold mining companies...

The war that never ends. We British are a peaceful people. When a war is over we like to consign it to the history books - and forget it. But for some the wars live on. The disabled from both World Wars and from lesser campaigns...

EEC rebuff on PLO issue

WITH A WEATHER eye on U.S. President Jimmy Carter's current Middle East diplomacy, the EEC has resisted strong Arab League pressure to recognise the Palestine Liberation Organisation (PLO) as the "sole legitimate representative" of the Palestinians.

France expels Polisario men, hints at intervention

AGAINST a background of Southern Sahara while on holiday in Mauritania, Polisario men were expelled from Mauritania last week by Polisario guerrillas of two French technicians, who were carrying out maintenance work on the railway line linking the Mauritanian iron-mining town of Nouadhibou with the port of Nouadhibou.

WORLD TRADE NEWS

Krupp ties with Iran lead to \$143m. order for copper plant

BY LESLIE COLLITT IN BERLIN AND ADRIAN DICKS IN BONN

Krupp's Industrie und Stahlbau... The Belgian company... National Iranian Copper Industries worth \$143m.

Ford still on Arab black list

KUWAIT, Oct. 30. KUWAITI day announced that the U.S. Ford Motor Company and all its subsidiaries and affiliates continued to be black-listed under Arab regulations for the boycott of firms dealing with Israel, Kuwait Radio said.

COMECON SHIPPING EEC watch on Eastern fleets

BY DAVID BUCHAN, IN LUXEMBOURG

SHIPPING is at last getting close attention from EEC policy makers. The catalyst for this has been the astonishing growth in Comecon fleets' share of bilateral trade with the EEC, and also of Western Europe's traditional 'cross trades' with third countries.

New chief for Bahrain Monetary Agency

BY DOINA THOMAS BAHRAIN, Oct. 30.

MOST two years since the Bahrain off-shore banking market was launched, the Bahrain Monetary Agency has announced a change at the top.

Australia beef rebuff

BY GUY DE JONQUIERES, COMMON MARKET CORRESPONDENT BRUSSELS, Oct. 30

THE EUROPEAN Commission dealt a sharp rebuff to the Australian campaign being waged in Brussels to persuade the EEC to grant more generous access for its exports of beef and other agricultural products.

Some 4.5m. tons of Iranian crude valued at about \$400m. (DM900m. at current exchange rates) was being taken by Krupp and resold to Petrofina, the Belgian oil group.

Mr. Josephus Loeff, the senior Commission official who presided over the recent high-level talks with a visiting Australian delegation, said that the EEC was prepared to negotiate most of the issues raised by Canberra only in the framework of the GATT, multilateral trade talks in Geneva.

Though Mr. Loeff said the Commission was prepared to continue discussions of the Australian demands, his insistence that they be dealt with in GATT has been interpreted here as an attempt to shuffe them off into a backwater.

Mr. Howard sought to put a brave face on the outcome of his talks, though his failure to bring back any substantive concession from Europe can hardly help his Government in its forthcoming election campaign.

Scotch exports to U.S. up

FINANCIAL TIMES REPORTER

BOOSTED by heavy imports in September in front of expected U.S. strikes in the U.S., Scotch whisky exports in the first nine months of 1977 rose by 8 per cent in volume to 70m. gallons and 28 per cent in value to \$38.5m, compared with the same period last year.



Alan H. Ulrick - Vice President, Manager, Foreign Exchange Trading, London

The relationship bank that leads in foreign exchange dealing.

However large multinational corporations or national companies may be, they are still very vulnerable to foreign exchange risks. The Chase has the experience and the track record to show how these risks can be minimized. Chase foreign exchange experts can advise on how to deal with the latest accounting standards, can make recommendations on hedging strategies and can implement corporate currency trading programmes.

Contracts

Italy has ordered 100 Unimate industrial robots from Omelco, a subsidiary of Tel. Ansaldo, the European division of the U.S.-owned company. The consignment, which is probably worth about \$4m., will start operating in the spring of 1978 in a system known as 'Robogate', a fully automated, robotically controlled system. It will be employed in Fiat factories at Rivalta and Cassino.

Over the next five years, 2,000 Unimate industrial robots are to replace outworn ones and 500 to cope with the expected increase in traffic. This is in addition to the several hundred buses which will be needed by the various companies organising tours for tourists on behalf of travel agencies.

Chase Network Chase can provide vast sums of money in local and Eurocurrency and operates essential banking services in over 100 countries.

Chase Merchant Banking Chase Manhattan Limited, the merchant banking arm of the Chase, is headquartered in London. It participates in private placements, Eurobond issues and the world's major syndicated loans to countries and corporations.

World Economic Indicators

INDUSTRIAL PRODUCTION

	Sept. 77	Aug. 77	July 77	Sept. 76	% change on year
U.S.A.	132.4	131.9	132.4	124.6	+4.3
U.K.	102.7	102.5	100.1	101.2	+1.48
West Germany	102.7	102.5	120.1	97.4	+1.2
France	124	124	128	104	-1.83
Netherlands	107	97	117	109	+2.54
Japan	129.9	129.3	130.9	124.0	-7.7
Italy	122.6	127.1	124.0	122.8	-4.3
Belgium	74.0	121.3	121.7	79.4	-

Chase Trade Financing The in-depth knowledge of the world's big export opportunity markets with all their complexities is at your disposal through Chase's trade finance specialists.



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HOME NEWS

CBI makes new bid to woo business

BY JOHN ELLIOTT, INDUSTRIAL EDITOR

A FRESH bid to turn the CBI into a Confederation of British Business covering all aspects of industrial and commercial life is likely to be made shortly after the CBI has held its first annual conference in two weeks.

Plans have been drawn up by Leyland, which may sink below Ford U.K. which set out a long-term target to take over British Leyland's position as market leader in Britain.

Ford plans to take market top place

BY TERRY DODSWORTH, MOTOR INDUSTRY CORRESPONDENT

PLANS have been drawn up by Leyland, which may sink below Ford U.K. which set out a long-term target to take over British Leyland's position as market leader in Britain.

Borthwick A broken Wilson not up to hopes

By Adrienne Gleeson

THOMAS BORTHWICK, the meat wholesaler, next month will report profits for the year to the end of September well below City expectations.

BY PHILIP RAWSTORNE

OPPOSITION from Cabinet as behaving with Ministers and Labour MPs to smoothness and efficiency proposals for trade union legis-

Journalists' closed shop 'a danger to freedom'

THERE CAN be no doubt that the majority of the parties involved in newspaper production are against closed shops in journalism, says the Newspaper Society.

Big companies back rise in £

MAJOR COMPANIES surveyed by the London Chamber of Commerce and Industry would favour an upward movement in the sterling exchange rate which would make imports cheaper but exports dearer.

Contracts given for trial coal combustion unit

BY KEVIN DONE

THE NATIONAL Coal Board has awarded the final round of major contracts for the £17m. international experimental coal combustion unit being built in Yorkshire.

Co-operative wholesale sales rise 11.4%

FINANCIAL TIMES REPORTER

CO-OPERATIVE Wholesale Society sales went up by 11.4 per cent during the first six months of 1977 compared with the same period of last year.

provided effective and controlled over wage increases maintained. "If this can be achieved," he added, "the long-awaited goal of stable inflation will come into view."

6 ways British Airways could be making your company more competitive.

Advertisement for British Airways featuring six numbered points: 1. Concorde, 2. First Class, 3. Executive Cabin, 4. The Business Package, 5. International Business Services, 6. Conference Service. Includes an image of a Concorde and a woman in a uniform.

Challenge to view on industry

THE VIEW that British industry is becoming dominated by a handful of huge companies is strongly questioned in a paper published today by Professor John Jewkes, until recently Professor of Economic Organisation at Oxford.

The paper, published by the Institute of Economic Affairs, casts doubts on the statistics which have been used to demonstrate the tendency towards concentration in British industry.

Forex submits its case to Wilson inquiry

LONDON'S foreign exchange market has a reputation for all round ability unequalled by any other centre. So say the foreign exchange dealers in the submission made by the Forex Association to the Wilson committee of investigation into U.K. financial institutions.

The dealers say that London's that they have caused difficulties for the pound in recent years by staging "bear raids". They say that such allegations are unjustified because close supervision by the Bank of England limits the size of dealers' short positions.

Congestion on roads increases

DESPITE NEW road building programmes, roads have become much more congested in the last 10 years. The number of vehicles per mile of road has gone up from 66 to 1966 to 86 per mile last year.

COMPANY NOTICES

BANQUE FRANCAISE DU COMMERCE EXTERIEUR US\$25,000,000 Floating Rate Notes due 1983 in sub-series of the issue of the above notes, the rate of interest has been fixed at 7 1/16 0/0 per annum for the ten-month period ending April 27, 1978.

ANNOUNCEMENTS

OSWEN, KERMAN & PHILLIPS solicitors, announce that with effect from 1st November 1977, the firm will be known as Kerman & Phillips.

LEGAL NOTICES

THE COMPANIES ACT 1948 THE LONDON SCHOOL OF ACCOUNTANCY LIMITED NOTICE IS HEREBY GIVEN pursuant to section 293 of the Companies Act 1948, that a Meeting of the Creditors of the above-named Company will be held at 23-24, Old Bailey, London, E.C.4 on Monday, the 7th day of November, 1977, at 11.30 o'clock in the forenoon for the purposes mentioned in sections 294 and 295 of the said Act.

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Table with 2 columns: Advertisement Rates and Premium positions available. Includes rates for Industrial and Business Premises, Residential Property, etc.

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هكذا من الأطل

HOME NEWS

Putting the future to the vote

By JOHN LLOYD

QUICK GLANCE at the Coal Board's figures for productivity over the 30 years... The NCB had 888 pits, employed more than 700,000 men and other workers and produced a little over 184m. tons...

OUTPUT AND PRODUCTIVITY, NATIONAL COAL BOARD, 1970-1977

Table with 5 columns: Year, Deep-mined output (m. tons), Output per man year (tons), Output per manshift (tons), Manpower (thousands). Rows for years 1970-1977.

With such an apparently impressive record of success, why did the NCB pull out all the stops to get a "yes" vote in the referendum for its productivity deal?

NEWS ANALYSIS - COAL OUTPUT

Harsh

The first reason is that the 30-year overview conceals a harsh fact that productivity has been declining over the past 10 years... The table shows that output in the early '70s, expressed in man years and manshifts, was steady, as it had done since the '40s and especially the '60s...

It committed itself, more than three years ago, to a "meaningful" scheme; and it would feel its credibility strained beyond acceptable limits if it did not do so... In 1974, the coal industry was given a very substantial shot in the arm, after a decision to promote coal as a real alternative to oil...

national incentive scheme now on offer... The National Union of Mineworkers put it to ballot, and threw it out. The only "system" the NCB could get away with was a national scheme, whereby if output went up nationally, all miners got a pro-rata increase...

miners can produce the coal the country needs; that "a nationalised industry can outperform all others"; and that "we can keep our side of a bargain"...

Cause

According to NCB executives, the cause of falling output-per-man is not so much to do with machines (which are, after all, getting more sophisticated), but with the wage structure itself and the length of time one wage structure will last... They subscribe to the notion, common in some academic studies on industrial relations, that any given wage system has a life of about 10 years...

Nuclear workers claim 'limelight' increase

By IAN BREACH IN WINDSCALE

EMPLOYEES of British Nuclear Fuels claim that they should be paid more to compensate for the stress to which they say they and their families have been subjected because of public interest in the atomic industry... The report is written by Stuart McDowell of St Andrews University, who was called in as arbitrator to settle the differences which remain after a seven-week strike at Windscale last spring...

logical pressures could be suffered, and had made their pay award for this reason, but rejected the larger claim of 30p to 30p as a concealed general wage demand... The company also denied that radiation levels had increased. They were well within the permitted limits at Windscale and "not a matter for undue concern."

The report adds some weight to remarks made last week by Mr. Louis Blom-Cooper QC, who in a closing submission to half of the national Council for Civil Liberties, predicted that workers in the nuclear industry would be subjected to more and more stringent security vetting and surveillance... It also comes only a few weeks after an alert at nuclear plants in northern Britain, when a tip from the Irish Government suggested that terrorists might attempt an operation on an unnamed establishment. Windscale workers say that police checking

More Home News on Page 35

FT GROCERY PRICES INDEX

Increase slows to 8.7%

By OUR CONSUMER AFFAIRS CORRESPONDENT

THE COST of the Financial Times grocery basket rose by 0.9 per cent in October to 257.9... But this index is still standing well below its June peak of 266.6, at the rate of year-on increase still falling... The January the index was down an increase of just over 1 per cent on the year. By last month this had fallen to 11.5 per cent... This month the increase has been cut to 8.7 per cent... The sharpness of the decline is largely due to fresh food prices... This time last year fresh prices were still rising... The total bill for fresh food and vegetables in October came to almost a third less than last autumn... All the other categories in the shopping basket are costing considerably more than a year ago... The higher-priced coffee had worked its way through to some shops, with one shopper having to pay £1.60 for a four-ounce jar of instant coffee—35p more than last month... Other shops had been able to hold the price at between £1.15 and £1.20, and one or two had made small reductions... The price of bread on last month in several shops... Higher-priced bread—up 1p a loaf in some shops—was partly responsible for the 11.5 per cent rise in the bill for their bread... Although as in other categories there were plenty of special offers... Chocolate biscuits, for example, were costing a penny or less this month in several supermarkets... The rise in the bill for canned

FINANCIAL TIMES SHOPPING BASKET OCTOBER 1977

Table with 3 columns: Category, October, September. Rows for Dairy produce, Sugar, tea, coffee, soft drinks, Preserves and dry groceries, Sauces and pickles, Canned goods, Frozen foods, Meat, bacon, etc. (fresh), Fruit and vegetables, Non-foods, Total.

goods could not be attributed to increases on any one single product... In some shops, it was tinned rice pudding which had gone up, and in others canned fruit cocktail or peaches... These increases were partly offset by price cuts in some stores on items like soups... In the same way, the falls in the bills for non-foods, frozen foods and dairy products helped to offset the rises in other categories... The falls in the frozen foods and non-food sections reflected special offers. Toothpaste

New Issue October 1977

BANQUE EXTERIEURE D'ALGERIE

ALGIERS, ALGERIA DM 100,000,000 7 1/2% BEARER NOTES 1977/1983 ISSUE PRICE: 100%

Grid of bank names and logos including DG BANK, Dresdner Bank, Kuwait Investment Company, etc.

Minimum lending rate 'too low at 5%'

MINIMUM LENDING RATE is too low at 5 per cent, and will have to be raised if the monetary position is to remain under control... The Bank of England might react by reintroducing the supplementary deposits scheme, popularly known as the corset, to curb the growth in bank liabilities, but it would be surprising if the private sector contribution to the money supply did not soon begin to rise quickly.

Our business is to help your business grow.

In Wales.

At the Welsh Development Agency, our job is to encourage industry to expand and develop in Wales... And that includes providing financial help for incoming companies... We can help finance your expansion programme with equity capital or loans. Or both... You'll find WDA loans are arranged at highly competitive commercial interest rates over periods adjusted to suit your development... In recent months, we've provided finance for individual companies from £1,000 to £250,000... Over the next few years, we'll be spending well over £100 million to help business in Wales... But finance isn't the end of the story. We have modern factory units for rent, lease or sale, from 1500sq. ft. upwards, throughout Wales... And we can give you expert advice about setting up your business in Wales. We'll also advise you on the range of government incentives available (including rent free concessions) and help you take steps to get them... It doesn't matter what size you are. If you can demonstrate that your business is viable or has potential, call us on the number below, and we'll talk business together.

Welsh Development Agency

Treforest Industrial Estate, Pontypridd, Mid Glamorgan CF37 5UT. Tel: Treforest (044385) 2666. Telex: 497516.

Technical Page

EDITED BY ARTHUR BENNETT AND TED SCHOETERS

COMPONENTS

Twin daisy wheel advantage

DOUBLE daisy wheels are an advantage on a high speed serial impact printer, the LDS-Ricoh RP-40, from Ultronic Data Systems (Dowty Group).

So far the only printer of its type on the market that has two rows of characters on the stems of the daisy wheel, the machine benefits from the fact that the wheel itself is 20 per cent smaller than other types on the market. This gives less inertia, improved wheel life, and higher speed. Metal character slugs, slipped over the plastic stems, produce better print quality and reduce hammer impact.

Maximum print speed is 40 cps, but the printer is capable of sustaining an average speed of 33 cps in a routine printing mode. Line length is 134 characters, 10-pitch or 163 characters, 12-pitch, switchable.

Ultronic Data Systems, UDS House, 3 Jefferson Way, Thame, Oxon OX9 3SU. Tel. 08421 3151.

RESEARCH

Converting cornstalks into alcohol

RESEARCH team at Purdue University, West Lafayette, Indiana issued a statement earlier this week to the effect that they had found a viable way of turning farm by-products such as cornstalks and wood into alcohol.

The scientists say that if the process works as well commercially as it does in the laboratory it might replace some of the 6,500,000 pounds of synthetic alcohol made annually in the U.S. from petroleum and used in plastics, synthetic fibres and similar products.

The breakthrough claimed is an enzyme-organic solvent which is used to treat the cellulose-rich material. The starch in the cellulose is broken down entirely

into sugar that would then be made into alcohol by fermentation.

The remarkable thing about the process appears to be its ability to make a total conversion of the cellulose to sugar: a ton of one field is a ton of the other, which is enough to make about 100 gallons of alcohol. Previous methods, it is claimed, have recovered little more than 50 per cent of the potential sugar.

An obviously significant aspect of the discovery is that it does not consume hydrocarbon deposits — the raw material is grown in fields. The Purdue team has calculated that production costs using the new process commercially are likely to be about 16 cents/lb compared with 171 cents/lb to make synthetic alcohol from petroleum.

Light destroys plastics

RESEARCH IS still in progress to find better methods of ensuring that plastics, especially those used in vast amounts in the packaging industry, shall not pollute the environment because of their high degree of imperviousness to rain and atmospheric attack.

Everyone knows how unsightly beaches and beauty spots can become at the peak of the holiday season and the news that a new photo-degradable plastic has been developed at the University of Toronto can only be welcome.

Under the direction of Professor James E. Guillet, the

chemistry department evolved a plastic formulation containing chemical bonds particularly sensitive to ultraviolet light.

Plastic sheet and the ubiquitous plastic cups left outside will crumble to tiny flakes in a few weeks, but is not affected indoors since ordinary glazing filters out a large proportion of ultraviolet.

The rate at which the degradation occurs can be controlled by varying the amount of sensitising agent incorporated during manufacture.

Both local industry and the National Research Council of Canada have supported the Professor's work and the basic patents rights are held by the University of Toronto.

For small computers

CHLORIDE Transpack—which was formerly industrial instruments and has established a special position in the no-break power supply market—has introduced a range of small static inverters in chassis form to enable small computer makers to more easily produce their own uninterruptible power supplies.

As well as protecting the critical computer load from frequency or voltage transients on the mains, such a supply incorporates a battery so that the processor is powered for the duration of a mains failure.

More from Stanley Road, Bromley, Kent, BR2 9JF (01-480 9861).



Components designed by Degremont Laing for a water cooling system for a fertilizer plant for the supply of all the ancillary plant for the project. Degremont Laing's £600,000 contract is for the supply of water treatment plant for the cooling system. This equipment includes a de-ionisation plant, fillers and a combined air/water washing system. The ion exchange fillers are designed for regeneration with nitric acid and ammonia. Work on the fertilizer factory to Shiraz is now under way.

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INSTRUMENTS

Prospects improve

TURNOVER at Sira in 1976/77 passed the million pound mark at over £1.1m, giving a profit for the year of £180,000. This compares with a loss of £84,000 for the previous year attributable mainly to the considerable investment Sira has made since 1975 in projects based on a positive search for new business opportunities.

A major contributor to the turnaround is the Association's specialist capability in electro-optical engineering and related by the Department of Industry CSSE Requirements Board. This is shown by the growth of the industrial optics business by 58 per cent compared with the previous year's sales and a growth over the past two years of 92 per cent. It is particularly significant that improvement in design received in this business area were contracts from industry of design assessment instruments for use in flammable atmosphere.

Important contracts from instrument manufacturers and inquiries have been won during the year both for the development and manufacture of new electro-optical systems.

There is an increasing requirement for the supply of special-purpose instruments to measure the quality of thermal imaging systems and television losses. The development of a new quality assurance system for measuring the surface form of aspheric optical components is nearing completion.

In industrial instrumentation, sales volume showed an increase

of 23 per cent, on the previous year, much of the increase being due to the instrument development or design work on behalf of both manufacturers and users.

The research contract reference electrodes supplied by the Department of Industry CSSE Requirements Board, produced results indicating a 58 per cent increase in sales. These are a cause of concern to the research community as the objective of the research is to minimize the effects by means of the Sira's new series of reference electrodes in design.

The new series of reference electrodes has been developed in direct benefit to British exports. It has handled a large number of projects and several special orders have been completed. The precision engineering department has shown a 56 per cent increase in sales compared with those of 1975/76. This is the winning of a major contract from the Space Agency, valued at £300,000 over a three-year period. In this contract, the company is currently in the final stages of development of a space instrumentation and industrial electronics system. The Association is working to the limit of its current technical capability.

Handles six scan points

ANALOG DEVICES is marketing what it believes is the first 3 1/2 digit, line powered digital temperature meter which allows automatic or manual scanning of up to six thermocouples. AD 2036 is suitable for multipoint temperature measuring and data logging, and temperature monitoring applications in process control, manufacturing, laboratory work and product design.

All thermocouple linearisation circuits, together with internal multiplexing for multi-channel

scanning and logic for complex or peripheral interfacing, are included in the package. It measures 3.92 inches by 3.92 inches by 1.43 inches, and has 1.5 inch LEDs. A miniature mounted knob allows automatic setting of the front end is included for protection against voltage analog input of up to 5V.

Analog Devices operates in Central Avenue, East Molesey, Surrey. 01-941 0466.

DATA PROCESSING Additions by Univac

NEW MODELS have been added by Sperry Univac to the 90 and the 1100 series of computers, together with a high performance disc storage subsystem.

First deliveries are scheduled for the second quarter of 1978 in the U.S. and the third quarter to the U.K.

The two new 90 models are the 90-2 which provides one megabyte of main memory and the 90-3 which can be upgraded. The former has 130 nanosecond machine cycle time, the latter 98 ns.

Making the inevitable comparisons with IBM, the company claims that, while priced competitively with the IBM entry level machine 370/148, the 90-2 generates 50 per cent more central processor power. It also maintains that a two megabyte 90/80-3 gives almost twice the central processor power of an IBM 370/148 equipped with comparable memory. The 90/80-3 memory can be easily expanded to four megabytes.

Both machines use the VS/9 operating system and both are compatible with the earlier 90/80

model and also the 90/60 and 90/70, so that earlier applications packages from these languages, including HOCUS, can be accommodated. ECSL package now being introduced.

ECSL (Extended Control Simulation Language) is a core event simulation language based on activity cycle diagrams. It has been tried and tested every stage of its development. Incorporated within the package is the CAPS (Control Aided Programming System) which writes more than 90 per cent of the program, so "conversation with the user" makes programming much faster as well as reducing errors, both in the programming and in the modelling stages. It is easy for programmers to read.

Selcon, Brick Close, KI Farm, Milton Keynes, MK11 3E 0908 565256.

Model easy to use

ATTRACTIVE in a new simulation package from Selcon is its ability to process over 80 per cent of the program by "talking" to the user. Its introduction is part of a campaign on simulation being carried out by Selcon Computer Services over the next four months. This includes seminars and workshops.

Cartridge store

INTRODUCED by Control Data Corporation is a storage device consisting of both enclosed disk pack, or cartridge medium of fixed disc capacity which can be varied, according to the model, suit requirements.

Known as the 9448 cartridge media drive (CMD), the system is able to transfer data at 91 megabits/sec, and according to the company, the new cartridge-style device to achieve this figure.

There are three basic models with total capacities of 32, 64 or 96 megabytes, having one, two or three discs fixed respectively, and of the total 18 megabytes is available in each cartridge as a cartridge store.

The cartridge, a new design combines the advantages of a front loading with the reliability of industry standard cartridge mounting. Data can be copied from the fixed disk to the removable cartridge, greater security of information at lower storage cost. The system is compatible with the company's existing cartridge-only and fixed disk drives. More from Control Data Corporation, 22A St. James's Square, London SW1 (01-930 7344).

MAINTENANCE Furnace life extended

A GIANT tower furnace installed at the British Steel Corporation's Panteg works in South Wales has undergone its first major overhaul. Designed and manufactured by Birlec in 1967 it is still the largest vertical bright annealing installation for stainless steel in the U.K. and is capable of processing strip up to 1270mm wide at rates of up to 620 tonnes a week.

In ten years of operation in the cold rolling and finishing department at Panteg this plant has annealed hundreds of thousands of tonnes of strip and the only attention it has required other than routine maintenance has been the periodic repair of the muffle.

After re-lining, a new muffle fabricated from nickel chrome alloy and weighing 4 tonnes, was hoisted into place and the furnace halves rejoined. The entire operation was completed in three weeks.

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PROCESSING Versatile blender

INTRODUCED by Foxboro-Yoxall is a blending controller based on a microprocessor which is able to deal with up to 24 components and will provide signals for flow control on-line blending.

The unit, called microBlend-Trii, consists of a blending control unit incorporating a CRT display, system logic control and front panel key pad and buttons.

Basic scaling factors are set in on controls behind a lockable panel. The operator then uses the key pad to make up the blend and obtains a read-out on the CRT. Having set in the total rate, he then presses the "run" button for the blend to start. Automatic compensation can be provided to allow for variations in temperature or specific gravity of component streams, or according to analytical measurements. With an additional card plugged in the unit can be supervised from an external computer system.

Security is provided against loss of memory by power failure and all valve outputs are fail safe. More on Redbill 65000 or from local Foxboro offices.

CONTRACTS AND TENDERS

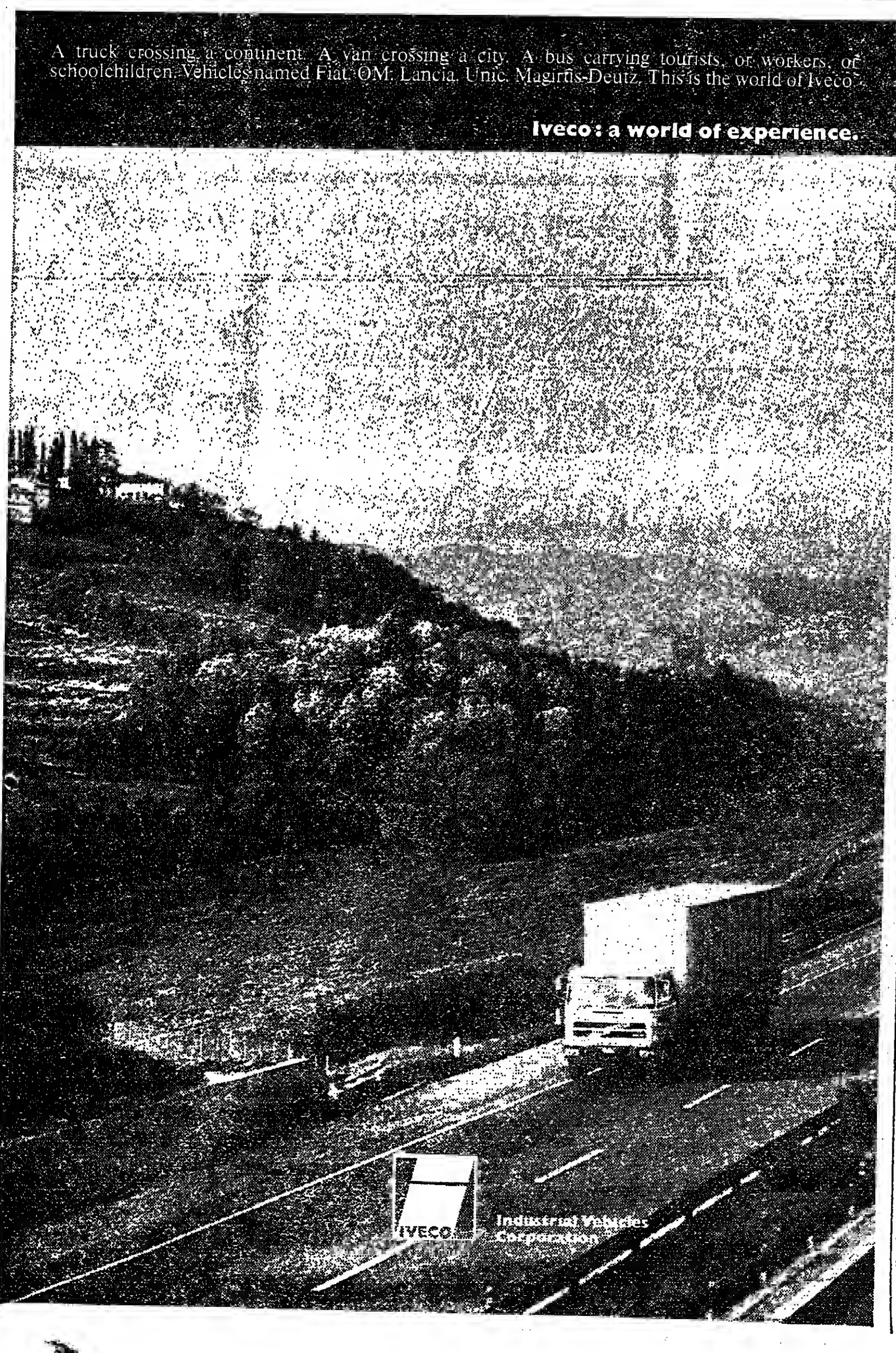
INVITATION TO TENDER FOR OVERSEAS PROJECTS

- Morocco/Agadir: A Moroccan business enterprise and banking syndicate is planning the erection of 600 flat-roof holiday houses, without basements. Each dwelling unit 540-645 sq. ft. (50-60 sq.m.), comprising living room, 2 bedrooms and kitchenette.
- Santo-Domingo: 1,000 holiday houses, each dwelling unit max. 800 sq. ft. (75 sq.m.).
- Saudi-Arabia/Riyadh: 150 holiday houses, each dwelling unit max. 1,292 sq. ft. (120 sq.m.).

Companies interested are urged to submit their offers to: H. Laska, Architect, Lahnstr. 87, 4000 Düsseldorf/WEST GERMANY.

THE PUBLIC ESTABLISHMENT OF FINANCIAL CORPORATION CONTRACTS SECTION

Extension of call for offers for the supply, mounting and installation of the existing cartridge-only and fixed disk drives. For further details, contact: FRANCIS PHILLIPS on 01-248 5000 Ext. 44.



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Without Jim Wood where would Pelargoniums be today?

Pelargoniums, says Mr. Wood, is the correct name for geraniums. And he should know. He has devoted the best part of his seventy-five years to pelargoniums. He loves them, passionately.

He has spent his time discovering new ways to propagate them, how best to make them thrive.

He has developed no less than sixty entirely new varieties, written books on the subject and for his services to the cause has been made the Honorary Secretary of the British Pelargonium Society.

In addition he has what must be the most colourful garden in South London.

Jim Wood still feels he has a lot to do. He would devote another lifetime to pelargoniums if he could.

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Monday October 31 1977

Why Canada is in trouble

CANADA habitually is a net importer of capital and settlements did come down to exporter of raw materials and about 8 per cent. Taken together energy. If something goes wrong with the devaluation that has with either flow payments gone some way towards rearing troubles result. That, in a nutshell, explains the decline of the Canadian dollar which has caused the Government to resort to a stand-by credit of \$US1.5bn. in the Euro market. It follows a running down of the official Canadian reserves this year from 4.9bn SDRs to 4.2bn SDRs at the end of August. The severity of the strains can be judged if it is realised that the money was spent not to hold the exchange rate, but merely to smooth out the bumps on the way down.

Nor should the stand-by be taken as a signal that the present rate against the U.S. dollar of 90.35, as against more than 110.3 year ago, will be defended. The market will be allowed its say, though in fact there is a fairly widespread opinion that the worst is over. As so often, the leads and lags have exaggerated trends, and the hardening of U.S. interest rates gave an added push.

The governor of the Bank of Canada, Mr. Gerald Bouey, did in fact say quite recently that the real surprise was not the weakness of the dollar, but its strength a year ago.

Energy deficit

Though the return of the Parti québécois Government in Quebec last November opened the trap door under the Canadian dollar, the real causes of its decline are related more to economic facts end considerations of economic policy. Three main elements stand out: the collapse of hopes that Canada would be self-sufficient in energy for years to come; the steep rise of wages in the mid-1970s; and the effect of Canadian economic nationalism on foreign investors, exacerbated by Quebec nationalism.

Because existing Canadian oil fields are past their peak, Canada must expect an energy deficit close to \$3bn. in 1982. That realisation has not, however, percolated to consumer level and altogether consumer confidence was euphoric well into 1975. It was then that the Government imposed wage and profit controls to shoot down inflationary expectations. The in-

Shoring up the grant

THE MOST important date in the ratepayers' calendar is now little more than a fortnight away. It is not one to which ratepayers normally pay much attention but it can have a decisive impact upon the amounts they will have to pay to their local town halls in the spring. For it is the day on which the Government announces details of the following year's rate support grant.

Jockeying

There are four key elements to this decision: the level of net local spending which the Government has accepted for grant aid; the overall percentage rate of grant; the cash ceiling for grant-borne cost increases next year; and the formula which will govern the distribution of the grant to local authorities. The first three elements indicate the relative toughness of the grant settlement. The general expectation is that next year's accepted net spending figure will be a shade lower in real terms than this year's; that the grant percentage will also be lower than this year's 61 per cent; and that the cash limit to the grant will be fully in accord with the Chancellor's thoughts about single figure inflation by the first half of next year.

However, it is the fourth element—the grant distribution formula—about which the local authority associations have become most anxious, as can be seen by the way in which this year they have conducted part of their traditionally private debate in public. A few years ago it was generally acknowledged that the distribution, not formula favoured the "shires" at the cities' expense. But a major effort has since been made to correct this, with the result that the shires have to their share of the needs 58 per cent. In 1974-75 no 53 per cent. This year, an effective decline of more than 8 per cent, while the metropolitan areas exist.

THE SPANISH ECONOMY

Señor Suarez tries to make a social contract

WHENEVER THE new long term interests to ensure Spanish Parliament con- that Government spending increases there are good-gearred more towards social unimpaired and bantering shouts welfare, that fiscal reform from the deputies of "keys, duces a more even distribution keys." The deputies are still so of wealth, and that Parliament unfamiliar with their Parli- mentary procedures that they economic performance.

The social contract can there- fore be divided into measures which will be applied immediately and longer term structural reforms. Wage restraint will have immediate effect: a 25 per cent ceiling for this year on new pay rises and nominally 20 per cent for 1978 which because of the method of calculation will in effect be 22 per cent. Control of wages is being used as the main instrument to reduce inflation. The intention is to reduce the current rate of 30 per cent (the average annual rate for January-August) to around 18 per cent by 1978. Wage restraint is being backed up by a 17 per cent ceiling on private sector credit increases in the coming year, plus curbs on official credit which is available to selected industries. The budget will be pruned by 10 per cent to hold it in line with the current year.

These measures could not have been pushed through, even though they are not particularly tough, without the corollary of structural reforms. The social security budget will be completely overhauled so that it is used for its proper purpose. In the past it frequently served as a source of liquid funds to prop up state and private companies.

Two years after Gen. Franco's death, it is the first formal attempt to dismantle the economic structure that were so intimately allied with his regime. The years of high growth and artificial protection, the feather-bedding of management, and the repression of trade unions provided no experience of how to deal with high inflation, depressed domestic demand, squeezed financial resources forward at an come to terms with less protectionism, greater accountability of public enterprises, and with trade union rights.

It is an odd situation for the world's tenth industrial power to find itself in. The Government is seeking to carry out not only important short-term measures to reduce inflation and cut the payments deficit, but also major structural reforms on a scale which, if carried through, would have few parallels in western economies. In every sense it is a venture into the unknown. For the moment both the Government of Sr. Suarez and the opposition Socialist and Communist parties seem anxious to hold each other's hands for mutual comfort. They need each other, and will probably do so at least until the economic measures begin to take effect.

The Social Contract is a complex piece of horse trading to be seen against the broader backdrop of political reforms—labelled by the Press and the politicians as the *compromiso colectivo*. However, the essence is simple. Sr. Suarez has been able to sell wage restraint to the opposition in return for guarantees that he will dismantle the economic system that sustained the dictatorship. The Socialists and Communists have taken a risky, though understandable, decision based on the calculation that it is in their



Prime Minister Suarez (centre) flanked by Communist leader Santiago Carrillo (left) and Felipe Gonzalez of the Socialist Party: pressure from the militants.

its subsidiaries' management. INI directly and indirectly controlling companies which account for 10 per cent of Spanish industrial output.

All this implies the acceptance of two principles. First the main economic beneficiaries of the Franco regime were the upper and middle classes which must now permit more elbow room to their fellow countrymen. Secondly the economy must be made more efficient and brought into line with the models of other European countries if Spain is to become a member of the Common Market. In particular management and technical skills must be overhauled. To that end Sr. Suarez may well be willing to see a number of badly managed companies go to the wall.

There is general agreement that the current economic problems stem from a failure to react to the increased cost of energy imports since 1973. The drop of demand and the dull growth of the past 18 months is in many respects a delayed symptom of what other industrial countries experienced in 1974. For instance, sharply increased overheads and slack home demand have begun to squeeze a number of basic industries like steel, shipbuilding, and certain sectors of the automotive industry. The houses and banks are alive with rumours of well known companies in financial difficulties. On the other hand demand for consumer products is still strong.

Some indicators have performed positively. For instance the reserves increased in August by \$905m, causing total foreign reserves to recover to \$53.7bn. There was an 11 per cent increase of the number of tourists visiting Spain in the

first nine months. The energy import bill this year encouragingly had increased by only 2 per cent to \$3.3bn. by the end of August, despite the OPEC majority price increase of 10 per cent in January.

The accelerating rhythm of exports, up 22 per cent, has also been encouraging, as has the declining growth of imports, up by 6 per cent. But this is deceptive. Emigrant transfers have declined, accounted for by the return of many workers and exiles from abroad. The energy bill does not yet reflect the impact of the 26 per cent devaluation in July. Nor is there any hope that the 26 per cent share of energy in imports can be reduced in the short term, even though the economic package includes agreement on going ahead with more nuclear power stations (probably four) and more use of coal.

There are those who feel that the measures themselves are not sufficiently draconian to cut the payments deficit from some \$3.5bn. this year to the hoped-for balance by 1979. Moreover, on the wages side the original government suggestion was a 15 to 17 per cent ceiling, considerably below what was eventually agreed.

A great deal depends upon wage rises being kept within the prescribed limits. The Government has felt obliged already to concede a 21 per cent increase to civil servants, barely squeezing by the norm, for the coming year. Some employers are already saying that they will have no option but to give way to higher demands. The sole sanction against employers for breaking the norm is the threat to withdraw official credit. That is unlikely to have much practical weight since most credit comes from the commer-

Distribution of wealth

The tax system will be re-structured to create a more even distribution of wealth with higher relief for lower income groups and the imposition of wealth and gifts taxes. Banks for the first time will be obliged to forgo their secrecy and assist the tax inspectors. More important, an enquiry is to be made into the banking system, one of the most distinctive features of Franco's Spain. On a conservative estimate the banks have built up a 40 per cent control of Spanish industry and are often in the position of being both shareholders and financiers of the same companies. They are a guard to their privileges and monopolies, fighting any liberalisation of interest rates, and of the rules governing the activities of foreign banks.

Tied in with this there are commitments undertaken by Sr. Suarez to make public enterprises properly accountable to Parliament. The state holding company, INI, has until now kept its own books and preserved its independence so that there has been no way of checking the quality of its own and

MEN AND MATTERS

A big day for Father Michael?

A shy and studious Jesuit priest, Father Michael MacGreil, seems set to stir a storm of controversy at an evening gathering in Chatham House, London, next week to receive the first Ewart-Biggs Memorial Prize for £1,500. This award, conceived out of the shock following the ambassador's murder by the IRA last year, is to be given for literary works furthering Anglo-Irish understanding. Curiously enough, MacGreil's success is substantially due to an uproar caused by Dr. Conor Cruise O'Brien.

As an extra twist, the former Irish Cabinet Minister will not be delivering the ceremony which memorial lecture he was earlier invited to prepare. Followers of Irish affairs will recall O'Brien's deliberately provocative speech recently to the British Irish Association's conference in Oxford, when he challenged the premise that most Irish people favour reunification. In doing so, he drew upon—and reinterpreted—the findings of an almost unnoticed new book, *Prejudice and Tolerance in Ireland*, by Father MacGreil. The latter, who was present, clearly did not know whether to laugh or cry: although the book was getting invaluable publicity (delegates later queued to buy it at £10 a copy from the "big man" MacGreil happened to be brought with him), O'Brien's conclusions were almost diametrically opposite to those expounded in it.

For all that, there was a sudden realisation that MacGreil had produced a significant study of Irish political attitudes. This came at a key moment in the search for the Ewart-Biggs Memorial prizewinner. The front runner until then was a newly-published and much acclaimed biography of Parnell by Professor E. S. L. Lyons, the Provost of Trinity College, Dublin. But there was a certain unease among the panel of judges as to its relevance. The MacGreil book, on the other hand, is based on the detailed statistical sampling of Dubliners during 1972. As one influential figure behind the Ewart-Biggs Fund excitedly observed: "It is the first solid body of raw research to have emerged from Ulster's eight-year crisis." So *Prejudice and Tolerance in Ireland* was hurriedly sent off to all the judges. O'Brien, meanwhile, was becoming embroiled in increasingly chilly discussions with the fund's organisers, who had asked him to give a memorial lecture at the prize-giving.

Message delayed

In the long Scandinavian nights, the Norwegian temperance lobby is nursing a disappointment. It had hoped that by this Christmas all bottles of spirits would carry compulsory "drink is dangerous" warnings on the labels. But the State Temperance Board has decided that—although there is "much to be said for the idea"—the ban on alcohol advertising introduced in 1973 should be given a chance to show results.

Arabic invitation

At a Press conference in London to mark the launching of Al Manar, a weekly Arabic-language newspaper, the British journalists present failed to elicit the fact that they will be very represented on the Board by



"The voltage reductions seem to be having an effect!"

two assistant editors, Walid el Hage, and Abdul Ghanim Mroueh. In the C category there are two substantial shareholders in Mahmoud Sharif, a Palestinian who formerly ran Qatar's information department but is now an editor in Amman, and Omar Zawawi, a prominent Muscat merchant. Also on the Board is R. C. Ashworth, former colonial servant and British diplomat, who was in charge of information and propaganda in Aden, Hong Kong and then the Middle East and now performs the same function for the Sultan of Oman.

Raynes says the demise of the Lebanon as a news centre, not the least because of censorship, has made Al Manar necessary. He declares that it will never be subject to "patronage." The first edition started with a "scoop" identifying "Captain Mahmoud," hijacker of the Luftbansa plane last month as the assassin of Abdullah al Hajri, the former North Yemen Premier, gunned down in a London street in April. Raynes promises many more news-breaks. Initially, Al Manar is being run off on the machinery of the Evening Post. Reading, by web offset. The plan is, however, to establish its own fully-integrated computer-setting operation in Arabic in London. In one vital respect, Raynes may have the laugh on the big Fleet Street proprietors. The printing unions concerned, he assures me, are co-operating wonderfully with the introduction of new technology.

Face-saver

Seen on a Winchester-bound train last Thursday: A public schoolboy, studying a copy of Virgil's Aeneid which was ostentatiously enclosed in the book jacket from an edition of The Kama Sutra.

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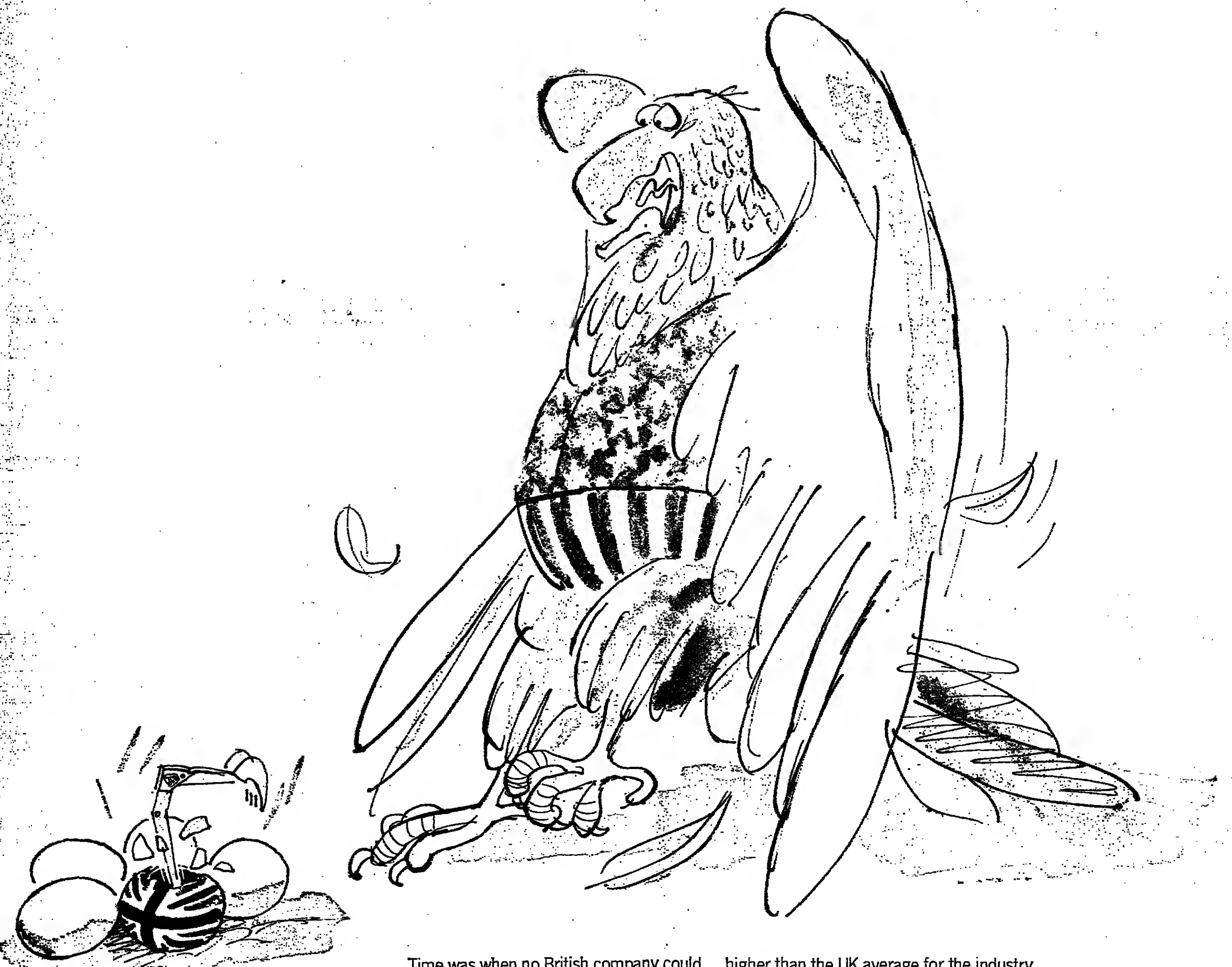
Observer

FINANCIAL TIMES SURVEY

Monday October 31 1977

Construction Plant and Equipment

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Time was when no British company could be considered serious competition to the giant construction equipment manufacturers of North America.

Until now, JCB, a privately owned British company, is significantly increasing its share of the world's markets, year after year.

How? First of all, we run our company every bit as well as the Americans run theirs. In many cases better. Latest available figures show that JCB sales per employee are between 15% and 84% higher than the largest American companies manufacturing construction equipment. And nearly 200%

higher than the UK average for the industry. We don't wait for business to come to us, we go out and get it. We're sales makers not order takers. That's why 65% of our production is currently being exported to over 100 countries.

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For a copy of the JCB profile write to: The Marketing Director, JCB Sales Ltd., Rocester, Staffordshire ST14 5JR. Tel: (0889) 590312. Telex: 36372.

JCB makes and sells five product ranges: wheel loader, crawler loader, crawler excavator, crawler loader, wheeled loader and telescopic handler.



CONSTRUCTION PLANT II

Although small by comparison with some of its American competitors, the British-owned construction equipment sector appears to be in good health — but there are long term questions about its ability to gain a larger share of world markets.

Adequate scope for growth

IF BRITAIN IS to take advantage of the benefits that North Sea oil will bring, and revitalise her industrial base, the construction equipment business will be among those industries in which that revival will depend. Not only is it already a successful industry, but it is one of the products of which there will be a continuing demand in the foreseeable future.

Not everybody in the industry agrees with the idea that mergers among the British companies are necessary. They point out that even if the three biggest businesses were merged, they would still be dwarfed by Caterpillar and Komatsu. J. C. for by Colas Cranes, making Bamford Excavators, the JCB is entrenched in one part of the construction equipment industry.

And the fact that Babcock and Wilcox, a company which had had cash to spend and has been on the acquisition trail, has not chosen to add to its successful construction equipment businesses in the last year or so has disappointed some observers.

Not all the British-owned companies are keen on the "we must get bigger to get better" arguments. Mr Edward Goodwin, managing director of Babcock's construction equipment division, is among them. "Many companies have lived on their wits for many years and do not feel threatened. If the multi-nationals have a strength we envy it is in marketing, not production," he maintains.

This view is echoed by Mr Anthony Bamford, chairman and managing director of JCB. "Putting us together with others might not necessarily help the companies or the country. Perhaps we should put money in distributorships, as that is where the competition is weak."

And it is on the marketing aspects that the NEDO sector working party is currently concentrating. "It is not enough to say that the future opportunities look good, we have to see where those opportunities will crop up and how the U.K. companies can best take advantage of them," is the way one member of the sector working party explains the position.

At one stage, the idea that the British-owned companies might operate in some territories through a joint marketing organisation, possibly financed by the NEB, was put forward. The plan was that something like a Japanese trading house might be established to sell U.K. products in some markets, such as Latin America, where the British influence has dwindled.

The marketing organisation would perhaps do a little "hedge engineering" by putting its own label on a range of equipment bought from several of the U.K. makers. This idea has been shelved because the companies could not see how to sort out the problem of who would own the trading organisation. But among those who believe it should be taken down again and dusted off at a future date is Mr R. C. Whalley, managing director of Sulzer Bros., and chairman of the sector working party.

Sales

According to the latest, updated Department of Industry statistics, the industry's sales at current prices last year totalled £826m, made up of £729m for construction equipment and £97m for mobile cranes. Exports increased by 30 per cent to £663m, of which £575m was construction equipment and £88m mobile cranes.

Largest

The scope of what is required can be judged by the Blackwood Rodge balance-sheet. This group, the largest distributor of construction equipment in the world, last year had an inventory of £114m, to support international sales of £250m.

THE STATE

of the domestic market for construction equipment can in the short term give little optimism among British manufacturers, but ex-years have created considerable port performance this year in the medium term the oil-producing countries will continue their rapid rate of expansion to build up an industrial infrastructure of roads, airports and other civil engineering projects.

Buyers

In terms of markets British companies last year sold £300m of equipment to the top 20 customer countries, led somewhat surprisingly by France, which has clearly re-exported a large proportion of this. Two oil-rich developing countries, Saudi Arabia and Nigeria, followed as the next most active buyers, while other EEC countries, particularly the Netherlands, were strong customers.

Stocks

The world distribution system needs to be strong enough to hold stocks of products at spare, and needs to be organised so that highly trained engineers are available to provide service commensurate with the effectiveness of the distribution system. It is crucial and capital intensive. Caterpillar stands for example, that there is no capital invested in its world distribution system than that is in the company itself.

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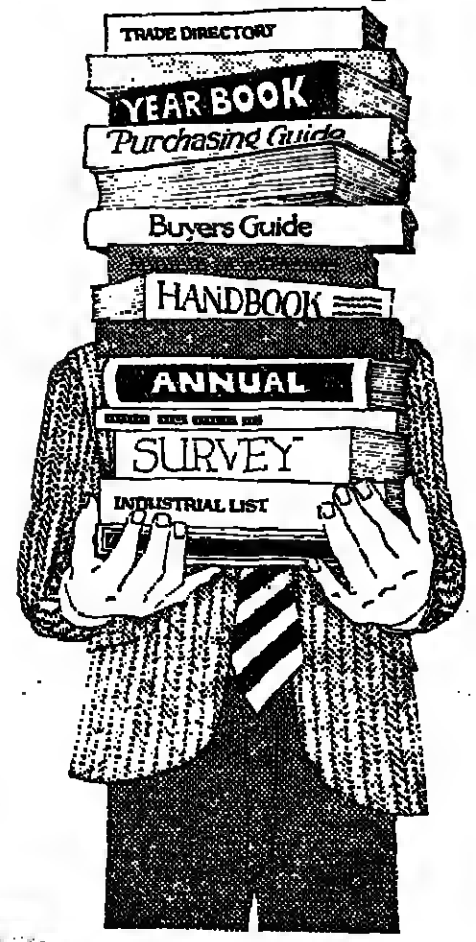
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Plentiful export opportunities

THE world construction equipment industry is dominated by the North American based international groups, many of which operate through subsidiaries in Britain, and by the Japanese, particularly the powerful Komatsu group. The extent of foreign participation in Britain is shown by the fact that U.S. subsidiaries account for about half the home market sales and half of the exports. Moreover, a number of British companies rely to a great extent on American engines for their products.

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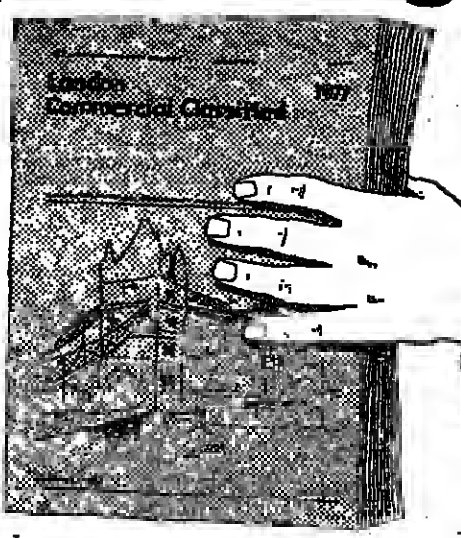


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Buyers

However illustrating the problems British companies face, it points out that the international scene for earthmoving equipment is dominated by Caterpillar and Komatsu with over 40 per cent of the world market. The report says that the sector exports about 87 per cent of its output; an increasing share of world trade will depend on action taken to broaden its expansion plans. It also pinpoints some of the problems faced by exporters, such as non-tariff barriers into Europe, and alleged short-comings of the Export Credits Guarantee Department.

Stocks

It is clear that both these companies have already realised the conclusions voiced in the NEDO report and acted accordingly, but smaller concerns in the U.K., without the resources to invest, are likely to remain at a disadvantage when competing with big foreign companies.

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NEXT FRIDAY Mr. Eric Varley, the Secretary of State for Industry, will attend a seminar at which the construction equipment and mobile cranes sector working party, set up at the National Economic Development Office as part of the industrial strategy programme, will report to the industry about the work it has completed during the past year.

There will be two main topics on the agenda: first a review of an overseas marketing strategy simply called "The importance of productivity." For anyone who still wonders what the industrial strategy programme is all about, this seminar will provide a useful insight to the work which has been going on. As far as the construction equipment industry is concerned, management, unions and Government are considering, in a realistic and positive way, what the industry might do to make a good performance even better.

For example, it was agreed that the working party should sponsor a study of international market opportunities and the way they might be exploited because, in spite of the strenuous export efforts of some companies, the U.K.'s share of world trade has been slipping steadily for the past 15 years.

The Inbicon research group was called in to test the marketing strengths and weaknesses of the U.K. manufacturers and put them in a European context. About 40 U.K. companies were interviewed and asked which overseas markets they consider to have the most potential and about the problems they have experienced so far in tackling those markets.

Then some ten companies in West Germany, France and Sweden were asked similar questions. The investigation was restricted to Europe because the sector working party wanted a quick assessment of the way overseas markets might develop and the way European countries viewed the situation. There was the possibility, after all, that some of the problems might have European rather than national solutions.

In any case Continental companies have in the past tended to put a greater emphasis on export than their U.K. counterparts. The West German construction equipment industry because, in spite of the

fulfil expected demand in both home and overseas markets. Many British companies however can cope with only one or other. In times of peak demand they have tended to switch back to supplying the home market at the expense of exports.

Discussion

Friday's discussion on the marketing investigation will centre around two inter-related problems:

(1) The financial and physical resources the U.K.-owned construction equipment groups require to get into new markets and;

(2) How these resources might be obtained.

It is acknowledged that it would be a major step for some of the U.K. companies to tackle new markets. Setting up stocks of machines and parts together with a servicing back-up is an expensive business. The sector working party knows the problems and of the possible way of providing some financial backing for would-be exporters.

The companies' view on this particular point has been expressed by one of the working party members, Mr. Peter Capel, a director of JCB. "The industry is not looking to the government to take all the risk out of the business. But if the government wants the companies to distribute their equipment around the world, the government should make some provisions to enable us to do just that."

In this context, the industry naturally turns in the direction of the Export Credits Guarantee Department to see how its services might be tailored to fit more neatly. To start with some companies would be prepared to pay the necessary premium if only the ECGD could offer "commercial risk" cover, something it cannot do at the moment.

Then a major bone of contention is the fact that the ECGD can only provide cover against an invoice from a customer, not from a distributor. In the construction equipment industry the distributors are the principal customers. The companies also maintain that there must be a way of providing some ECGD cover for inventories, so essential in supporting any overseas sales effort.

But it is obvious that even

likely to hinder the company progress. The work of the construction equipment working party last year has also concentrated on productivity and management. Friday's agenda: "The effect and availability of manpower to be a constraint on sub-committees has been a matter of management, union, NEDO and the objective of improved productivity by determining best practices in the U.K. overseas. It is proposed the results of the study disseminated as widely as possible through discussions at company level," stated the party's December report.

The "productivity study committee" has been set up to examine the performance of some companies and will go on to compare this with some of European counterparts.

And the changes might not involve just British companies or even those in the construction equipment business. European link-ups are a possibility. And there is already an overlap with the industrial truck industry, for example, as both are making rough terrain lift trucks.

All these efforts on the part of the British companies should not obscure the point that if one of the major North American companies operating in the U.K. decided either to pull out or to increase its investment here it would radically alter industry's balance of trade. All but one of the major North American construction equipment groups have manufacturing facilities in Britain and between them they already account for well over half of the industry's exports.

In its report last December the sector working party pointed out that "foreign multinationals manufacturing in the U.K. are operating close to capacity limits and further investment by them to expand capacity, widen their U.K.-produced range or increase U.K. component

snatching will, to an important degree, depend upon the impact of macroeconomic policy on the relative attractiveness of the U.K. as an investment area."

This is a point which Mr. Varley will be reminded about on Friday. But the Government has already reacted to it. The construction equipment sector working party is one of 40 set up as part of the industrial strategy programme. However, it is also one of the five sectors chosen for "special emphasis" that Department of Industry officials have given a bit more of their time to "chosen" firms.

So various ministers add upon them. For this time senior Department of Industry officials last summer visited several of the international construction equipment companies, and the idea was to find out at first hand from their managers what policies the companies would prefer the Government to pursue and what actions would be

variation. There is a wide variety of productivity within the construction equipment sector. Statistically, the best has the best labour productivity in the whole of engineering but this "best" is pulled up sharply by the performance of the American companies and by the best of the British together. The productivity study committee has already concluded that changes will be needed in many companies' productivity to be increased and in this connection proving useful that it is in the working party and steering committee particularly strong.

About 40 companies will be represented at the seminar. It will be made quite clear that anything which is to be done must be done in the companies. The Government is not attempting to "impose" some "grand strategy" upon them. For this time the strategy is that it should be those companies' ambition and ideas which hand from their managers what policies the companies would prefer the Government to pursue and what actions would be

will blow up into an industrial dispute as occurred earlier this year when construction workers including machine drivers discovered they were operating close to what they believed to be potentially dangerous asbestos.

Onshore and offshore work related to the North Sea oil industry has brought new job opportunities as well as big money and, at the moment, the building of the huge oil terminal at Sullom Voe in the Shetlands is providing one of the few regular sources of overtime.

But like most new things it has brought problems in its wake and the "closed environment" of North Sea life, whether that of a crane operator on a rig or a dump truck driver amid the "barracks" style life of Sullom Voe, has bred problems for the workforce and for the union officials whose job it is to look after their interests.

Nick Garnett

Increasing scope for union activity

THE LABOUR pool for the plant hire and manufacturing industry operates in a highly structured industrial relations framework with machinery for wide ranging and close consultation between unions and employers, highly-developed training schemes and detailed national agreements.

In general, the sector is marked by relatively low basic pay boosted by incentive schemes, a fairly good record of industrial peace and growing fears about unemployment which is proving a major worry for unions throughout construction.

The separate labour framework for the plant hire industry has its roots in the formation of the Contractors Plant Association in 1941.

The CPA, representing U.K. plant hirers, now has a pay and conditions agreement with the three principal unions in construction, the Transport and General Workers' (by far the most important in plant hire), the Union of Construction and Allied Trades and Technicians and the General and Municipal Workers.

The agreement falls under the general auspices of the Civil Engineering Construction Co-ordination Board, whose overall agreement for the construction industry also covers the plant hire sector other than for pay and conditions.

It covers all operatives on JCB's cranes and earth movers. The construction section of the engineering workers' union has a separate agreement with the CPA dealing with the manufacturing side of the industry.

In general matters, including industrial relations, the CPA keeps in close contact with the Federation of Civil Engineering Contractors, the employers' side of the CEECB.

Basic pay is about 80p an hour with payments of up to 15p an hour extra for the larger machines in the 25-100 tons category.

Union officials say, however, that this bears little relation to actual pay packets with a widespread system of cash incentive schemes, bonuses and, when buildings demand allows, overtime payments.

A £2.30 to £4 Phase Two pay deal for all construction industry workers was agreed this year and runs from June.

Among plant hire workers, as throughout construction, there is now considerable unrest over general pay and conditions.

The unions are committed to a drive towards a 35-hour week, higher basic rates with consoli-

dation of pay supplements and additional holidays in a new settlement to run from June next year.

Training, through the Construction Industry Training Board, covers driving and vehicle and equipment maintenance and terminates with City and Guilds examinations.

Under the CEECB, a trainee can sign a training service agreement to cover a three or four year period with training principally carried out at the huge Bircham Newton civil engineering college near Kings Lynn. Joint union-employer committees of the industrial training board monitor the training schemes carefully with a regular system of visits and meetings.

The biggest headache facing unions in construction is employment which has severe spin-off effects right through the industry and has made a significant impact on plant manufacturers and operatives.

The unions say that the 11.5m tons of open cast coal "won" in the 12 months up to March this year saved about £37m. In oil imports. Projections appear to show that open cast digging could provide 15m tons a year by 1984 and another 5m tons on top of that by the end of the century.

Beyond the savings on imports, open cast coal helps provide the flexible element in production that allows the Coal Board to meet demands.

The unions, however, have been blocked on a number of schemes by the pressure of the environmentalists' lobby.

Mr. George Henderson, the Transport and General Workers' national officer for construction says that union officials believe the lobby is well meaning. But he points to the short life span (2 to 3 years) of most open cast workings and the fact that many open cast areas are returned to their natural state.

"I'm concerned about my members and I'm concerned about unemployment. One of my jobs is to ensure that open cast mines are opened up."

The same problems exist in many of the country's main gravel extraction areas, like the Thames Valley which provide work for a large number of plant hirers and operatives.

Health hazards too are a major union concern. Although relatively tight health and safety regulations cover construction sites, the nature of the business can nevertheless have unfortunate side effects for plant drivers and maintenance crews.

Respiratory diseases, dust in the lungs, and the "white finger" suffered by workers using vibratory tools are monitored by both unions and employers as well as the rules governing all work areas where there is a constant physical danger. Quarrying still has the highest accident death rate of all U.K. industries.

Occasionally, a health issue

Unemployed

Out of the estimated 2m workers in construction, the latest figures put the unemployed at more than 203,000. This is largely the manual labour force. When the professions, including civil engineers and architects are included, the number is probably more than 275,000.

The unions are worried, too, that the situation does not appear to be easing in any significant way. Figures indicate that unemployment in U.K. building dropped 1 per cent in August over May. The figures mask a number of marked regional differences, however, with Scottish unemployment (29,000 workers) worsening and the major northern areas showing no improvement. The £400m boost for construction in last week's Budget will go some way towards alleviating the union's worries.

One of the effects has been to drive out of business some of the smaller plant hire firms. Not only has the general poor level of activity in construction shrivelled job opportunities but it has also hit pay packets by eroding bonus and overtime earnings for plant operatives and workers employed in plant manufacturing.

The unions have been making determined efforts to try and persuade the Government to inject a much greater amount of money into construction as a restorative measure for the industry. At one point earlier this year union officials were

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Assal ye feete wile muddle (and ofty mes worse)
And raine and fogge a sure depressyng curse

Of progresse fore ye projects is theyre none
Wyle wages and ye plante costs eke goe on
And ye barons and theyre ike inne parlyment
Devysse freshe means too lessen oure contente



Butte hold! is theyre no starre thesee days too lyghtenne
Twixt Bendidormme and Christymast, deo too bryghtenne?
Ye calendar no festy velle tou hoast?
Too lyde us til ye mince pyes and ye roast?

Aye, middle darke Novembers skirtes methinks I spye
A comlie legge too lyft ye jadede eye
aloft - a comlier thynge, ere nowe concealed -
Ye damsel Interbutle is nowe revealed



Hir Palace (moved theyre nowe too Englands centre)
Goode menne and lesser goode she urge to enter
Hir treasures theyre too see inne store on store
Ye rooffe trusse and ye windeys and ye door

Thesee ilke inne shappes and syzes theyre too see
What was inne building, is and what will be
Ye liddle 'prentyce boys artfully will fix
Ye woode joynis and wyle the cemente ye bricke



HEAVY EARTHMOVING and levelling equipment manufacturers make up the bulk of the U.K. market in construction equipment, accounting for a third of total sales with a turnover of £282m. in 1975.

Yet as companies in this sector know only too well, 1975 sales represented the last of the orders before the U.K. market ran sour. There was a short-lived upturn earlier this year, as local authorities and private companies brought forward plant purchasing to take advantage of the regional development grants before these were withdrawn in March 1977.

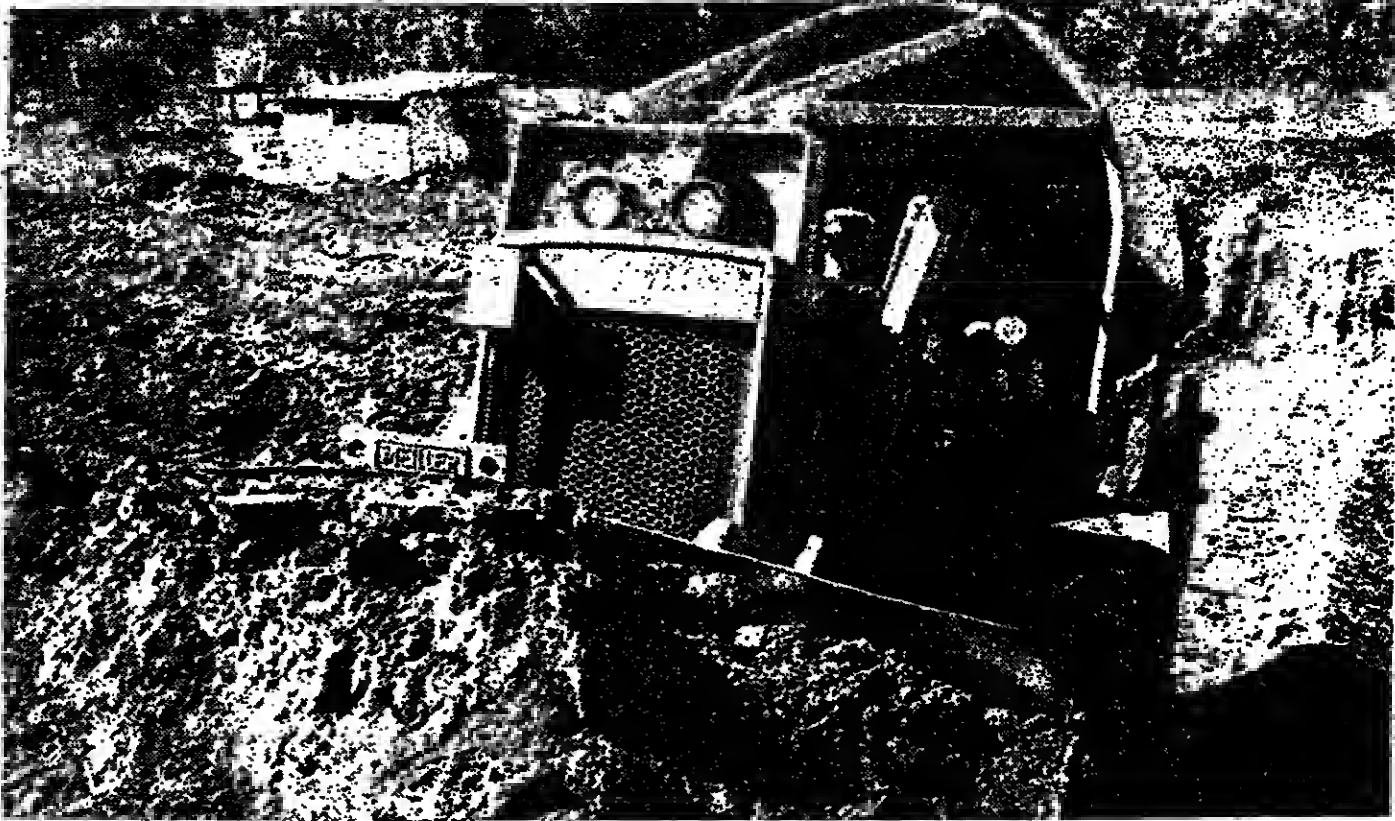
But even this improvement in U.K. sales did not represent an absolute growth in the market for heavy earthmoving and handling equipment. Buyers accelerated orders that would probably have come later this year. The industry is still working through these orders, but for some items, earlier ordering has meant a virtually near-empty workshop floors this October.

The problem which has long-faced the heavier end of the construction equipment industry is that its products are so specialised that they are dependent on a handful of user markets. Earthmoving and levelling equipment including crawler tractors, graders, earth scrapers, dumpers and off-road shovel loaders are purpose-designed to work on specific, large scale projects. When Britain was building hundreds of miles of motorway each year, there was a steady demand for these huge machines. But the moment local authorities and the Department of the Environment cut back on these big money-spinning programmes the heavy equipment was unable to find sufficient alternative uses to cushion the manufacturers.

Divert

Only the broadest-based companies have a sufficiently wide range of interests to divert resources from the heavier end to lighter, more general purpose, equipment. But a glance at a list of leading companies in the business of making heavy earth-moving equipment reveals there are few with such an ideal combination of products.

British Leyland's Special Products Group comes close to such an ideal, with its Aveling-Barford, Aveling-Marshall, and Goodwin companies making



Massey Ferguson MFD 700C hunting for sapphires in Australia.

much of the heavy equipment needed for motorway building, quarry and open-cast mining work.

Aveling-Barford's managing director, Mr. A. Cheetham, is responsible for manufacturing and selling off-road trucks, with carrying capacities from 17-50 tonnes; graders for open-cast work; road rollers; tractor shovels; and dump trucks. The sister company, Aveling-Marshall, makes crawler

Mr. Cheetham said his company was still maintaining its share of the U.K. market, despite a severe fall in orders, which has now reached an all-time low for 30 years. It was very much a buyers' market, said Mr. Cheetham, yet some companies at the heavier end of construction equipment manufacture had not been left with completely blank order books. These orders were still profitable, at least for many of the larger companies in the industry, perhaps indicating the high price levels which prevailed during periods of high demand as in early 1975.

Aveling-Barford has picked itself up during the recession by

stepping up its export drive. During periods of active demand in Britain, the company managed to sell 65 per cent. of its output overseas, leaving itself to find U.K. market outlets for the remaining 35 per cent.

Now, said Mr. Cheetham, the company had boosted the proportion of equipment going overseas to 70 per cent. He intended to maintain this export level even when the British market picked up once again.

In an act of faith that the market will pick up at home and that it will be possible to maintain an increased presence in overseas markets, the company has started a £6.4m. investment programme. This is designed to expand production capacity in off-highway trucks, up to 50 tonnes capacity, in graders for the open cast market and in road rollers, tractor shovels and in dump trucks. The major beneficiary of the programme is

the company's plant and workforce at Grantham, Lincolnshire. Approximately 750,000 of the money will boost component fabrication production equipment at Newcastle upon Tyne.

This will ensure the company has adequate capacity through the 1980s; building the new production plant itself will continue until the end of 1979 or early 1980. Meanwhile production of some items of heavy construction plant at Aveling-Barford's factories and those of other manufacturers like General Motors in Scotland, where Terex equipment is made, is severely depressed as a direct result of public expenditure cutbacks.

One of the worst affected sectors is that producing road rollers. Industry representatives have talked of roller sales in Britain being "decimated", especially in the three to 14 tonnes range. Sales are so de-

pressed in this product line that companies are talking in terms of having no work at all in a few months unless Government action is taken to stimulate local authority road building and repair programmes.

Few managers in the industry have experienced such a depressed road roller market. Many believe the rate of intake of new orders has reached rock bottom, but everyone is despondently worried in case this trough bottom should be rolled flat and extended into 1978, by inadequate Government recognition of the urgent need for more road work.

In other sectors the picture is much the same, with the grader market the exception as the National Coal Board extends its efforts to exploit open cast reserves. Manufacturers describe the grader market as "buoyant". The U.K. market for tractor

shovels is less buoyant, but described as being as active as any, a comment which brings rosy glows of comment from the manufacturers.

Companies producing off-highway trucks up to 50 tonnes capacity and dump trucks are finding demand sluggish, with the crawler market quiet. The cut-backs in road building and maintenance are again possible, not only for obvious reasons. The quarry which supply road building material are running at around 50 per cent. of capacity, a pe state of affairs when the plant manufacturing sector would like to see a boom to replacement equipment mark. Quarry managers have been things to do with their scarce resources than to buy new plant when much of their existing equipment is lying idle.

Worrying

But what is worrying heavy construction equipment manufacturers more than anything is that this depressed state of home demand has now become a feature of their industry, approaching three years, with the slide starting in 1975, that time there was a lack home generated orders, with industry working at 80 per cent. of capacity. Even then some firms were operating at only 50 per cent. capacity, but now, the cut-backs in public expenditure for roads, motorways and their simple repairs begin bite, there can be few companies at the heavy end of the industry working at much over 50 per cent. capacity. Heavy dependence on local authority road work is now recognised by the industry as something to be avoided, and it is true that manufacturers benefit from the constant cyclical demand created by Scotland's North Sea bonanza. This may have helped mitigate the worst effects of the cutbacks in the public sector, oil terminals and pipelines as built. But as every company knows it will be a long time before such welcome relief business comes their way again.

Lynton McLain

The building site and its concrete mixer

MOST PEOPLE look on the concrete mixer as the building site's basic machine—and no wonder. Battered, caked with generations of dried concrete, noisy, belching fumes from an erratic engine, fed apparently haphazardly with a mixture of sand, lime and water; it has all the qualities to create a popular image.

The manufacturers of this modern artefact, however, are less concerned with this aspect than with its saleability in contracting markets. Concrete mixers, and the various types of concrete placers, account for about a 3 per cent. share of the British construction equipment market with a sales figure, in 1975, of £27m. Exports are crucial, but they have to be fought for.

The past few years have been difficult, largely because the longer than expected depression in the U.K. building industry has meant a low level of demand from the home market, and thus made the manufacturers cautious about investment. This caution, while understandable enough, has meant that it has been correspondingly more difficult to compete in export markets.

Compensate

Comments from the reports of Babcock and Wilcox, whose Winget division is one of the largest manufacturers of concrete mixers and concrete placers, illustrate the point. In 1974 the chairman said of the company: "Winget Ltd. was the company most affected by Government price controls and the collapse of the house-building market. However, they have done very well in expanding exports to compensate for lower sales at home."

In 1976 the comments show the same mixture of optimism and caution: "Sales of concrete mixers and dumpers continued at a satisfactory level in spite of the depressed market at home and the very competitive conditions abroad. As a result turnover and profit were maintained at a similar level as in 1975."

The bias of treating exports much more seriously than the domestic market is one which has been forced upon the companies in this sector. Historic-

ally—and even now—British companies have stood up very well to foreign competition; one manufacturer has estimated that in world markets the British-made dumper still commands something like an 87 per cent. share. The figure is probably over-optimistic; but it is certainly true that the companies manufacturing this kind of machinery have been showing reasonably healthy export books in recent years.

Take another example—Braham Millar, the Enfield-based group which makes a varied range of construction equipment including asphalt plant, concrete mixers, and concrete batching plant, and screening plant. In his report for this year the chairman says:

"We would be confident of reaching a further increase in the volume of output to the current year. Demand from the Middle East remains strong and from other areas is also encouraging. Active measures are in progress to develop our business even more widely, especially in the Far East, based on Hong Kong, and we shall be taking part in the International Material Handling and Construction Exhibition in Singapore in the autumn. The home market remains in the doldrums, but with an encouraging current of orders from customers obviously taking the long-term view."

To put the chairman's remarks in perspective, Braham Millar has shown a steady, even dramatic, gain in profitability over the past five years, while the home market has been "in the doldrums". In 1972 turnover stood at £2.4m. with a pre-tax profit of £181,000. In 1975 it rose to £3.9m., with pre-tax profit up to £396,000.

The following year, an exceptionally bad one on the home front for most industries (and for this industry in particular), saw turnover at a standstill at £3.9m., with a very slight rise in profitability to £313,000. Then in 1975 the rise resumed; turnover went up to £5.6m., with pre-tax profits of £516,000. In 1976 turnover was £6.6m., and pre-tax profits £599,000. This year, turnover was up again to £8.4m., pre-tax profits to £972,000. There seems little doubt that next

year will see the breaking of the £1m. barrier.

The growth shown by these figures is almost wholly confined to exports. The proportion of total turnover represented by exports has risen, from under 50 per cent. in the early 70s to over 70 per cent. now. The group is working virtually to capacity, with three-quarters of its exports going to the Middle and Far East markets, where demand is still buoyant.

Shareholders who gathered last month to hear the chairman's statement were told that there was "an almost insatiable demand" for the group's products in the major export markets.

Like other manufacturers in this sector, Braham Millar is taking advantage of the good times to invest in new machine tools and new plant. It plans to spend £1.25m. on updating machinery throughout the group; the expenditure can be financed to a great extent from cash flow.

Floorspace

Barfords of Belton, Special Products Division, is similarly expecting growth; the company is investing £400,000 in new machine tools and in 28,000 square feet of extra floorspace. The company will announce two new products in 1978, but is coy about saying what they are. "This is a very highly competitive business," says Barford's managing director, Mr. P. B. Durrant. "I don't think our competitors could copy anything we are introducing for 1978, but we err on the safe side."

The company markets abroad through Aveling-Barford International, and reckons on the Middle East, Nigeria and West Africa generally as being its best markets—though these it now thinks, are tending to level off. "The peak was around 1972-73," says Durrant.

Barfords, however, claims success in the home markets too. Two years ago it reckoned on a 6 to 7 per cent. market share. To-day it estimates it has 15 per cent. of domestic sales of concrete mixers and dumpers. Recent big orders have meant that three big contractors have all "gone Barford" as the com-

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United in the strength of our organisation, service and product range, our Construction Equipment Division is clearly the emergent force in the Industry. With the traditional strengths and products of world-famous Member-Companies, and modern marketing methods, our ambitious goals are being met with uncanny precision. Profitable expansion depends on increased volume and our investment programmes are starting to bite.

The emphasis in 1977 has been on ever-increasing sales volume and the continuity of this programme is assured by a massive approved capital expenditure of £13 million on increasing production capacity. And tough delivery dates are being met. With "Aggressive, profitable expansion" as your motto, you've got to be good. And we're every bit as good as our words.

Aveling-Barford Limited

Member Company Aveling-Barford, Britain's leading manufacturer of earth-moving machines, makes graders, articulated wheeled loaders, compaction equipment - and dump trucks. Since 1971, this Company has sold Centaur Dump Trucks valued at £34 million to 38 markets worldwide. As part of a £7 million investment it has now started development work on the U.K.'s largest dump truck.

Aveling Marshall Limited

Aveling Marshall, the only British-owned manufacturer of crawler tractors, has just landed the biggest orders in a 130-year history: a total of £4¼ million from Pakistan and Kenya. This coincides with the second phase of a £5 million expansion of production capacity.

Barfords of Belton Limited

This important Company has dramatically increased its worldwide share of the market for dumpers, mixers and vibratory equipment for the building site. Notable among a new generation of products is the 3½ ton 'Boxer' Dumper.

Goodwin Barsby Limited

Goodwin Barsby, a market-leader in asphalt, quarry, sand and gravel equipment, also makes a wide range of primary and secondary, fixed or mobile, crushers. Recent exports to Guyana, Tanzania and the United Arab Emirates for mobile quarry and asphalt units were valued at £1.5 million.

Aveling-Barford International Limited

This is the vital 'export' Company, formed to handle all international business. Its importance can be measured by one simple fact: well over 70% of production is exported. Which is what is meant by export-led expansion.

Construction Equipment Division
Leyland Special Products

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CONSTRUCTION PLANT VIII

Road builders aim at greater efficiency

ROAD BUILDING in this country has been a declining industry for some years. According to figures from the Department of the Environment the amount of Government money spent on roads in the year ended March last was £223m, more than half (38 per cent.) of which went into motorways. The DoE estimates that by 1978-79 Government spending on roads will have fallen to £205m, and within this two-year decline of 30 per cent. the amount spent on local authority roads stands to fall by more than two-fifths.

The ramifications in this sort of projection for the road making and maintenance industry — both for the contractors and the machinery makers — are far reaching. For the latest DoE estimates merely suggest an acceleration of a trend that has already set in, a trend towards reduced levels of activity that is currently creating some very chilling winds for the roads industry. The DoE estimates mean that Government spending on roads by 1978-79 will be a full 43 per cent. lower than it was at its peak in 1973-74, with the decline at the local authority end of the business extending to some 53 per cent.

Pressures

There are, of course, pressures for some sort of official reversal for this pattern of events — for example, around an eighth of the total U.K. unemployed are building workers of one sort or another — but few in the construction industry set much store by them. The pragmatists are simply grinding their teeth and setting on with the job of making do — increasing efficiency where possible at home and expanding in overseas markets.

In fact most of the major road contractors in this country now have a more than vital stake in roadbuilding and maintenance outside the U.K. Among the makers of construction works by calculating in terms of working months per machine

like Blaw Knox — which produces a range of paving machines and dominates the home market for this type of product — that export around four-fifths of total production. Roadmaking in this country remains a largely fragmented industry. If there is a leader the accolade probably belongs to Tarmac which could control as much as 12 per cent. of the home market, competing directly against companies like Wimpey, McAlpine and A. Monk. Tarmac's roadbuilding activities come under the auspices of the Tarmac Construction subsidiary which at the moment has something like £18m. at current market prices) of construction equipment under its control.

Tarmac stresses that construction equipment at its end of the business is not especially advanced in terms of technology. It tends to be heavy-duty, solid, with reliable mechanics able to withstand an immense amount of rough handling in all types of weather. The company occasionally finds itself using trimming machines which combine a laser operation with general robustness, and a recent innovation in paving machines has led to the use of the embryo road. But for the most part the backbone of its fleet is the earthmoving, digging, scraping and crane variety of basic machinery.

The average working life of road making equipment will vary from contractor to contractor. Tarmac prides itself on the efficiency with which it uses its machinery — thanks largely to the use of computerised system allowing the company to turn over (sell and replace with new parts of its fleet at "just the right time."

Something like 30 per cent. of the plant that the company uses would at any given time come from plant hire companies. Of the rest, more than half would be adapted to the computerised system which works by calculating in terms of working months per machine

and discounting the re-sale price against the cost of a new replacement machine. The system works in areas where machines are many in number, where activity is relatively higher and where working lives are generally understood. Tarmac implemented the system in the late 1960s and to date is very happy with the results.

Flexible

For the most part the equipment used by the major construction companies is flexible enough to be handled in all weathers, on all types of ground and in conjunction with almost any type of road building programme. At Tarmac the heavier machines — such as earthmovers — would have a working life of between five and seven years while at the lighter end smaller machines would generally be replaced by the company at intervals of between three and five years.

Roadmaking plant is made by a variety of engineering companies. The top 10 worldwide producers of construction plant and equipment are all American — with just two exceptions, Komatsu of Japan and the Canadian group Massey-Ferguson. The latter is remarkably European-orientated with something like 70 per cent. of its earthmoving production within the EEC. This country is the main base for the company's digger loader. Its factory in the North East has the distinction of being the only custom-built specialist digger loader production plant in the U.K.

The company's range of crawler and wheel shovel loaders have in recent years developed dramatically, providing the means to tackle a far wider range of jobs. Developments in tyres and axles have enhanced the machines' abilities to take on really tough jobs. Torque proportioning differentials in both front and rear axles have cut down wheel spin and consequent tyre wear.

Frequently the basic work-horse on a road site, hydraulic excavators and trenchers not only have the ability to cut trenches for pipelines and services to exacting levels but can also shift earth in bulk in confined corners where space for a wheel loader or crawler could be insufficient. Major developments have taken place on Massey-Ferguson's range of excavator hydraulic systems which currently feature some of the most up-to-date designs to be found within the construction equipment industry.

Part of the Babcock and Wilcox organisation, Blaw Knox, is one of the largest makers of paving machines in Europe. The

company designs and makes products which are used on small as well as large contracts to construct or re-surface roads, motorways and airfields throughout the world. A paver is a remarkably versatile machine capable of laying all types of road materials other than pavement quality concrete. The Blaw Knox machines can lay in thicknesses of up to two feet with a minimum depth of some 4½ inches.

One distinguishing feature that marks a Blaw Knox machine out from its rivals is that it is wheel-based rather than crawler propelled. This means that the equipment does not have to be low loaded from site to site.

Depending on a number of factors — depth of laying, width of road surface and the sheer logistics of supplying the paver's hopper with fresh material to lay on the emergent road — pavers tend to travel at laying speeds that vary from five to 40 feet a minute.

The Blaw Knox paving range centres around six machines ranging in price from around £15,000 up to nearly £45,000 for the PF 980. This is a machine designed specifically for contractors needing a machine that can provide the extra width required by motorway and airfield contracts.

Jeffrey Brown

High expertise in opencast mining

OPENCAST COAL mining as practised in Britain is both a booming industry, with ambitious new production targets of 15m. tonnes a year, and a highly efficient industry. Coal is recovered and sold at a handsome profit in contrast with conventional deep mining which, overall, only just breaks even. Heavy plant is employed on a scale that most industrialists would wish to emulate but could never match.

A £4m-plus walking dragline is often to be found on the bigger British opencast sites working round the clock to scrape away over-burden and reveal coal seams. But the site will be entirely in the hands of just three or four men. Even

obtaining planning permission, often in the teeth of fierce opposition from environmental groups. Last year the Opencast Executive raised production by 1m. tonnes and put in 15 applications for new sites. But more than half of those applications have resulted in public inquiries — some protracted.

The capital purchasing programme for opencast site equipment was designed by the Executive to cushion the effect of the industry of uncertainties about where and when the coal will be extracted next. The NCB always operates in an atmosphere of considerable and an uncertainty about its future successful contractors for sites is because of the difficulty of

the chemicals industry cannot match capital investment per employee on that scale. During the past seven years the Opencast Executive of the National Coal Board, a body which operates with considerable autonomy from its separate offices in Harrow, has run a purchasing programme for some 133m. has been spent on items including big electric walking draglines, smaller diesel crawler draglines, electric and diesel mining shovels, and dump trucks.

Thus the contractor can move in

without delay and without the worry of trying to scour the world for a perhaps unobtainable giant walking dragline. The transfers are made at cost prices. The NCB has not attempted to make profits on the transactions.

Some items of plant have been leased, explained Mr. Malcolm Bish, chief production manager of the Opencast Executive, but generally the Executive keeps ownership of the big draglines.

The plant buying policy was designed in a hurry when, following the 1973 increases in oil prices, the NCB began a programme of coal expansion. But it is a policy which has since proved satisfactory both to the NCB and to the opencast site contractors.

Mr. Bish says that plant is selected by the Opencast Executive directors and all proposals for capital investment are submitted to the NCB for approval. Factors taken into account in the ordering programme include opencast contractors' current plant holdings; machine age and the desirability of replacement at the appropriate time; technical specification and suitability for sites being considered; availability of electric power; and manufacturers' delivery times in relation to the working programme.

The NCB likes to buy British and to further that policy has recently encouraged Ruston Bucyrus at Lincoln to build about 60 per cent. of two new American designed Bucyrus Erie walking draglines. Each of these giants has cost some £4m. and weighs 1,500 tons.

Mr. Bish forecasts that the Opencast Executive may standardise in the future upon new draglines capable of shifting 26 cubic metres of earth with each "bite." They will be smaller than some of the giants already in use but will be more versatile. They will be used mostly on the long-life sites where a drag-line can be expected to work continuously for many years between major servicing. Handy drag-lines of about 9 cubic metres capacity are seen by the Executive as the most useful tool for its smaller sites where draglines are suitable and where mobility is required.

The smaller draglines are being developed by American companies to meet the special needs of opencast sites in Britain and some other countries. They can be either diesel or electric-powered.

In Britain most opencast sites are currently using excavators

in the 6-3 cubic metres range. They can shift their loads, on average, every half minute. On the largest sites the giant draglines can shift up to 26 cubic metres each minute. B. Genrdic, the machine that is recently been moved from Sisters site, Northumberland, another site at Butterwell, take a 190-ton bite every second.

The Opencast Executive has given much attention to dump trucks during the revival of opencast mining in the last four years. The movement towards bigger trucks has been supported and machines now use have capacity of between 40 tonnes and 70 tonnes. A fleet of big trucks in use on NCB sites is expected to increase to at least 600. At present around £100,000 each they represent a considerable investment.

Extra

Opencast mining in Britain has a good future, one which is well recognised now by the construction plant industry. A number of extra sites have to be opened before the Opencast Executive can raise production from the current 12.5m. tonnes a year to the desired 15m. tonnes a year.

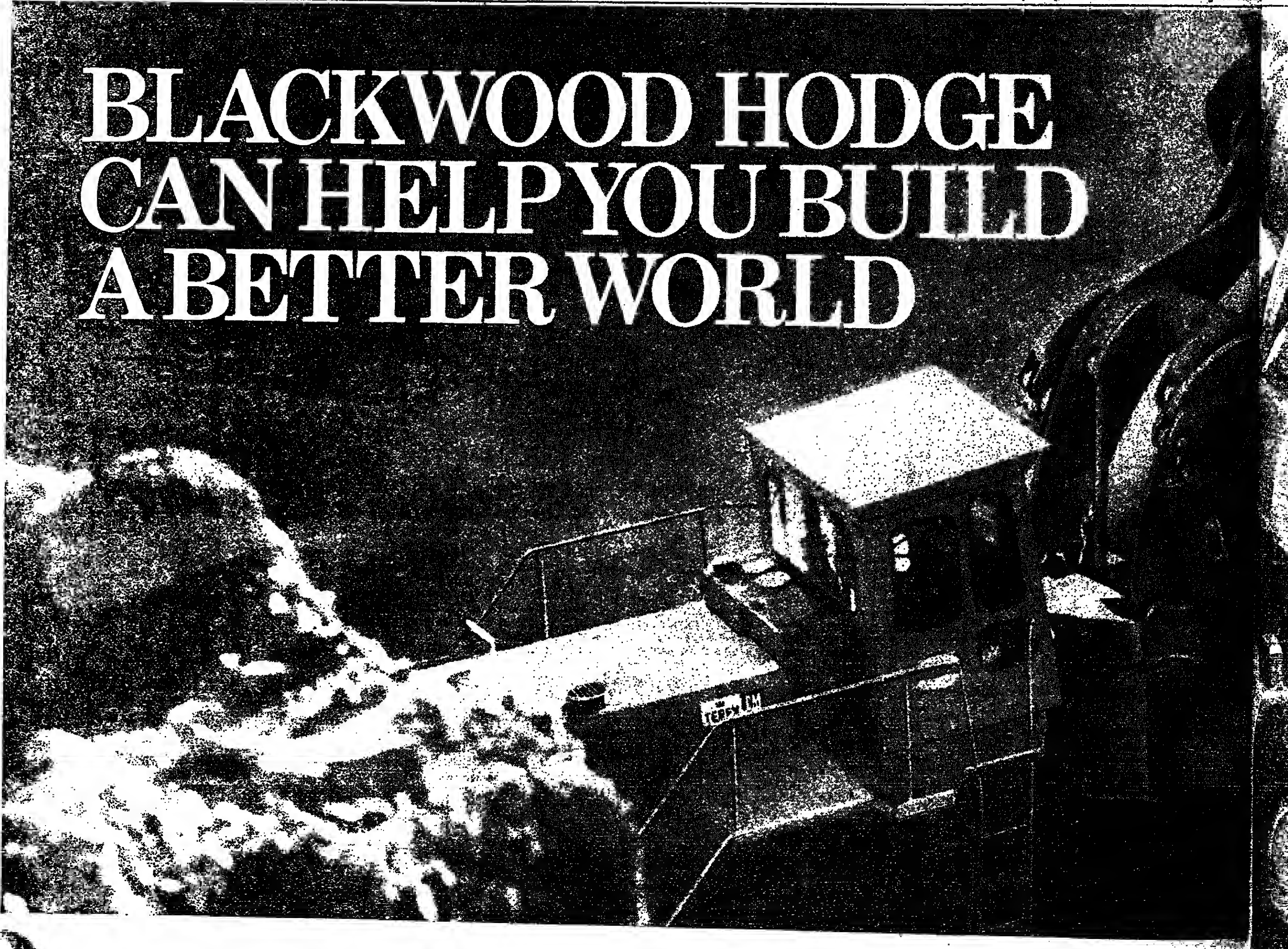
In the long term the industry may easily be called upon to reach for a more ambitious 20m. tonnes a year target if some of the current forecasts about growing world demand for coal come true. Estimates by the World Energy Conference of international coal usage at a between four and six times current levels 40 years on from now. In Britain deep-mining is extensive and sophisticated. It is expensive and, over the next half century, will have to compete on price with other forms of power, including oil, gas and nuclear.

The NCB has an opportunity to obtain good coal quickly and — most important — cheaply by opencast mining. Thus it is in the Board's interests to see its opencast operations so well that opposition to temporary disruption of stretches of countryside will not become as serious as to damage the programme.

The Opencast Executive is building a world reputation for the sophistication of British opencast techniques and the high quality of countryside reinstatement after the coal has been taken.

Roy Hodson

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CONSTRUCTION PLANT IX

The distributor network

EVERY construction manufacturer would like to see a good distributor network essential for success in overseas markets, not every country has the same requirements. In the U.K. the two very distinct markets are taken by J.C. Marshall Excavators (JCB) and the construction equipment of Leyland Special (Aveling-Barford, King Marshall). Apart from trucks made by one subsidiary, LSP acts as the distributor in the U.K. On the other hand, makes direct sales at all and relies on its various distributors.

Ward as distributor of the Aveling Marshall trucks. But this was a bang from the days when those Aveling Marshall Fowles called Marshall Fowles Ward has now the distributorship of the LSP the chance of the Aveling Marshall to its own distributor.

Picking

David Abell, managing director of LSP, insists that the market is not small enough for a manufacturing company to be successful itself. He says: "LSP we have so many when specification possibilities that we could not ask a dealer to stock the lot. No dealer would want to stock the very large machines we are costing £150,000 each—because of the this would tie up. He expect us to do that for him."

The problem does not crop up relatively less-expensive equipment such as JCB. He added: "The main selling point in favour of having its own distribution network is that 'it puts us in the market place.'

His view is that a manufacturer has to face enough problems financing his own productive business and that the financial burden involved in distribution should be shifted on to the broad back of the distributor specialist. In this JCB has modelled itself on Caterpillar of North America, a group which has evolved into the world's leading construction equipment business and has done so by building a worldwide network of very strong distributors who are all active financing. It was noticeable that Caterpillar came through the recession, inflation and a period of high interest rates nearly unscathed because of this approach to marketing.

JCB is not, in fact, in any way in need of cash. It currently has no borrowings at all. This is thanks to its policy of insisting that each U.K. distributor sends a cheque with each order to cover the full sum. The cheque is cleared at the time the machine or machine which have been ordered are despatched from JCB's plant at Rotherham.

The distribution groups themselves usually appear to weather the storms better than their manufacturing principals. This is because they are more flexible. A manufacturer cannot quickly decide to make some other kind of equipment. But a distributor can put more emphasis on those machines which are currently in demand and usually makes sure he is handling a broad enough range to cope with the ups and downs of the capital goods trade cycle.

The fact is, too, that a distributor has not just one but three businesses. He sells new equipment. He has a servicing and spares operation. And he has second-hand equipment interests.

This latter business is one of the most important contributions the distributor has to offer. Many potential customers looking for new construction equipment demand a trade-in deal on their existing machines. When new and based-up though

they might be. It is simply not possible for a manufacturer to take in part-exchange somebody else's equipment. But a distributor can. And he can work on that machine, refurbish and renovate it so that it becomes a saleable product for his second-hand business.

Financial packages are important too. Customers ask for credit terms, they want to lease instead of buy and so on. The distributor must be in a position to answer these needs without falling back on the manufacturer for support. It is therefore not surprising that some of the leading U.K. distributors of construction equipment belong to financially-oriented groups. Caledonian Tractor, for example, is part of the Lloyds and Scottish finance group. And Bowmaker is owned by C. T. Bowring, now one of the largest financial services groups in Britain but which began as an insurance and re-insurance business.

Bowmaker (Plant), the construction equipment distributor subsidiary, was formed in 1941 out of the need to help the war effort. It has developed dramatically, thanks to its connection with Caterpillar—in 1950 it became the Caterpillar dealer in the Midlands, Wales and South-west England.

Bowmaker says it provides "a total dealer service" to the customer, "a service which ranges from advising what equipment to buy, through part-exchange and finance facilities, service exchange parts, inspections, on-site maintenance, in-shop conditioning and scheduled oil sampling, to a comprehensive field service."

The company supplied Caterpillar equipment to Cuba in 1960, the next year was made a dealer for the Indus Basin project in Pakistan, and since 1965 has also promoted Caterpillar sales in Finland.

Britain also has a unique con-

cern in Blackwood Hodge, the ant brought in by Mr. Sunley shortly after the war to help in the financial side of the business. It now operates through more than 50 companies in 27 countries. Most of the companies are wholly-owned subsidiaries, nearly all of them distributing construction equipment and diesel engines. The 1976 turnover of Blackwood Hodge was around £250m.

The company was founded in 1839 but in 1942 Bernard Sunley, then a building and civil engineering contractor with ambitions, bought out John Blackwood and Niall Hodge. The foundation for the Blackwood Hodge expansion was based on a franchise from what was then the Euclid Road Machinery Co. of Ohio giving the U.K. company the selling rights in almost all the countries of what at that time was the British Empire—including the U.K.

Franchise

Euclid became part of General Motors, and although part of the business was later hived off for antitrust reasons (Euclid is now owned by Daimler-Benz), today the General Motors Terex distributorship is Blackwood Hodge's most important franchise.

Bernard Sunley died in 1964 by which time Blackwood Hodge was well-established and expanding rapidly. The worldwide entrepreneurial concept he had established was continued under a new chairman, Mr. Bill Shapland, a chartered account-

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Heavy forklift trucks

Rough terrain forklift trucks (RTFT) comprise one of the few product areas of construction equipment that in recent years has managed to buck the downwards trend of sales. Mechanical handling in its more sophisticated forms has, it seems, come late to the building site—and agents are screwing the last ounce of efficiency out of their operations in order to survive what looks like proving yet another very bleak winter for construction activity.

Thus in striking contrast to their counterparts elsewhere in the world U.K. makers of forklift trucks aimed specifically at working in hard conditions continue to notch up relatively

being shaped specifically for use by building operatives.

In this country the RTFT made a very slow start. Anyone looking back over the development of the vehicle will notice that although forklift trucks have been in operation for basic industrial uses—such as warehouse work—since the middle 1940s, rough terrain versions did not really make a commercial appearance until the early 1950s. Just after the World War II the armed forces were using RTFTs, but these were very large and expensive. It was not until the Building Research Station introduced its "Humper" in 1962 that a commercial RTFT became viable. This event proved a major catalyst. The sixties saw the development of the RTFT at its most intense, with rough terrain models emerging in their own right rather than as hybrid adaptations of conventional industrial machines. The process has accelerated in the seventies.

Market leader in this country among the makers of RTFTs is undoubtedly Manitou, which is part of the construction equipment empire built up by the private French company Braud Facheux. Manitou entered the U.K. market in 1971. In which year it produced barely 50 units. In the 12 months ended last January some 800 units were sold, lifting turnover to around £6m, and allowing the company to claim a U.K. market share of

almost 50 per cent.

At present Manitou offers a basic range of RTFTs with a lifting capacity ranging from two tonnes up to eight tonnes. In December the company expects to unveil yet another model—a new 2½ tonne capacity truck to be launched at the Royal Smithfield Show. The new model can be adapted for use in the construction industry but it will mostly appeal to the farming community.

The mainstay of Manitou's success in building up an enviable share of the U.K. market in RTFTs is its marketing policy. The company currently operates through 25 dealerships, plus a number of sub-dealers, and its sales and service outlets number over 80.

The company does not compete with the plant hire industry and unlike some of its competitors it never sells directly to an end-user. The management philosophy is that if a dealer network is to be strong it must be profitable: to have a series of house accounts would mean that dealership profitability could be weakened, which would then possibly result in the erosion of the underlying capacity of dealerships to offer sales and maintenance services.

Part of each dealer's agreement with Manitou is that the former must carry a minimum value of spares and stocks. The dealer is responsible for every new machine delivered to a customer and is responsible for ensuring that customer operatives understand the function of all controls.

During the pre-delivery check a run-down is given on all use and maintenance features. A 20-hour inspection by the dealer is carried out free of charge, with 13 basic maintenance tasks put into effect by the new operator under the supervision of the service engineer attached to the particular dealership. A further inspection—again free of charge—is carried out after the Manitou machine has been in operation for 120 hours. Other French manufacturers well represented in this country include the Buckinghamshire based Sambron and a relative newcomer, Salev.

The home grown products come from a variety of sources. JCB has recently been adding new models to its range while among the smaller producers there are companies like Bonser Engineering and the privately owned Sanderson Forklift Company. Hymac, best known for its hydraulic excavators, is also in the field.

Based in Berkshire and part of the engineering division of the Pwll Duffryn group.

Mirrors

The experience of the plant hire companies in the field of RTFTs equally mirrors the growing demand for such vehicles. Richards and Wallington, through its Jones of Hull subsidiary, has been deluged with inquiries. One of the largest plant hire companies in this sector is Furk Truck Rentals, part of the Kaye Organisation which owns Lansing Bagnall. The company aims to provide a complete service and although its fleet is mostly based on Lamsue Bannell equipment it will acquire specialist trucks and equipment from other manufacturers.

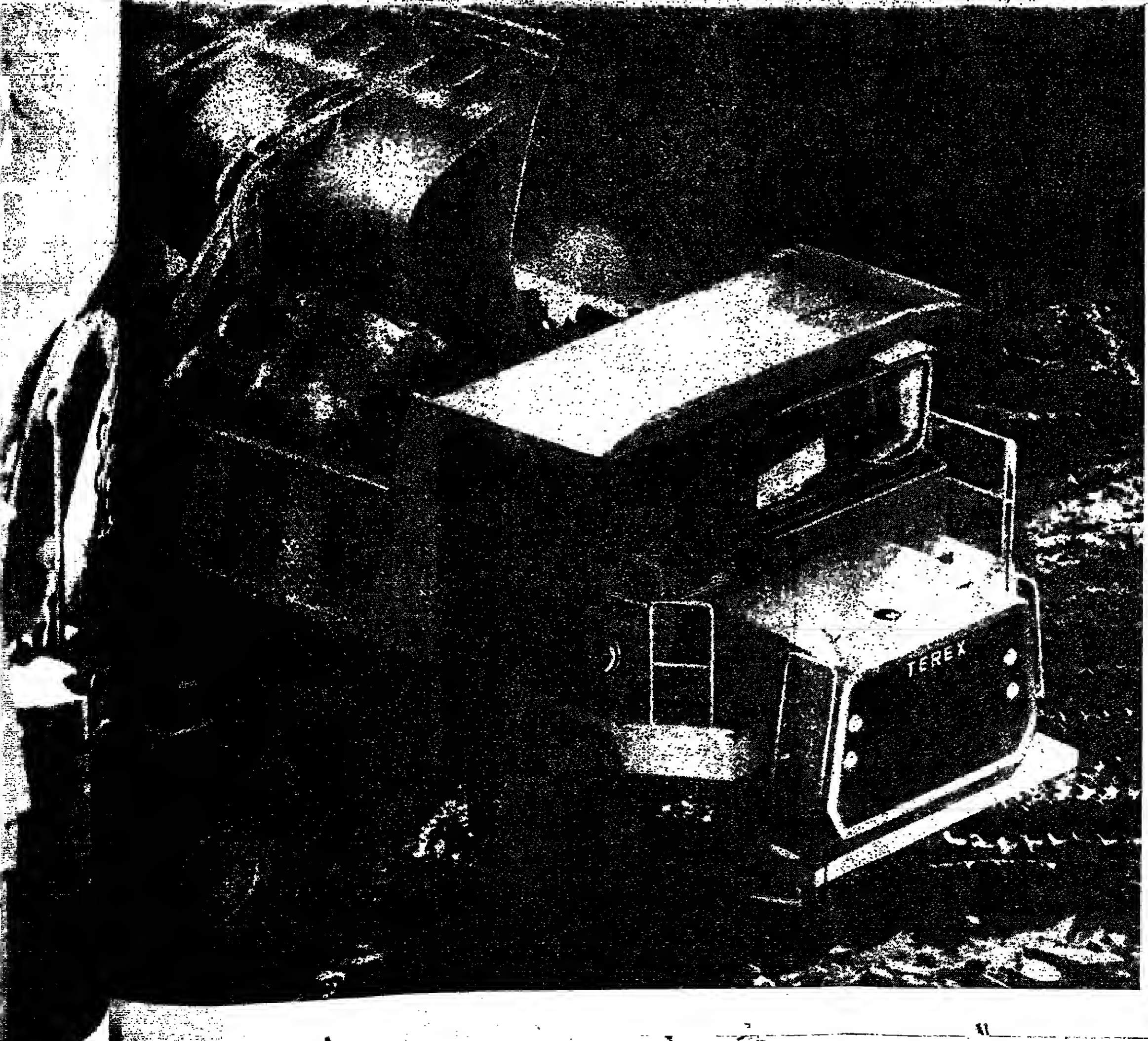
Harvey Plant is another name well known in forklift truck hire; so is L. Lipton, which was one of the earliest companies to specialise in this form of equipment.

Reports emerging from the plant hire industry suggest that business in RTFTs is picking over at a relatively comfortable pace. The worst of the liquidity squeeze is clearly over for most construction companies, although there is still an obvious reluctance on the part of most builders to tie up too much capital in plant.

In the current depressing climate for the building industry, machines can fall idle both suddenly and unexpectedly. Forklift trucks of the type used in construction work can prove invaluable in cutting work-hour costs, but for the moment the building industry's hiring patterns remain heavily biased towards short-term contracts.

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THESE MEN ARE WORKING TO REVEAL ONE OF BRITAIN'S LEADING CONSTRUCTION MACHINERY BUILDERS.



David Dunn and Jack Laurie are tackling the job for the North of England. Neal Davies is responsible for the South. Harry Fieldhouse is covering Northern Ireland and Scotland.

These are four of the best men in the construction machinery business. And now they're four men with a mission: spreading the word about Fiat-Allis, one of the largest manufacturers of construction machinery in Britain.

Up to now, it's been a well-kept secret. Right here in Essendine, near Stamford, Lincolnshire, Fiat-Allis builds some 1500 units a year. That's equal to over a third of the total British construction machinery market. But virtually every one of these machines was earmarked to fill export demand.

The secrecy is over.

Now we're expanding at Essendine. And we're making our move to become an important, permanent part of the market at home.

David Dunn, Jack Laurie, Neal Davies and Harry Fieldhouse are four key members of our new dealer network. From now on, they're going to eat, drink, talk, sell and service Fiat-Allis. And only Fiat-Allis.

The goal: 20% of the market.

They're going to handle the entire Fiat-Allis line, the line that makes Fiat-Allis a leader in Europe. The crawler machines you probably already know. The complete wheel loader line we build at Essendine. The new hydraulic excavators. And the big dozers and scrapers that have earned Fiat-Allis five continents' worth of reputation.

These men already know their goals for the next five years. Their definition of success is 20% of the domestic market.

We're giving them everything possible to achieve that goal. Not just the machines, but all the parts and service back-up that you require.

Which means that we're giving you every possible reason to listen to what your new Fiat-Allis team has to say.

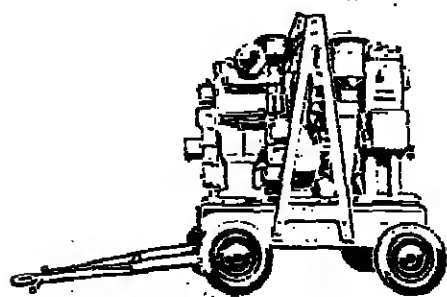


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CONSTRUCTION PLANT X

Crane makers look overseas

TWO PARTICULARLY strong mobile crane manufacturers without increasing the labour force emerged in the U.K. following the merger boom of the 1960s. The two groups, Coles Cranes, the Acrow subsidiary, and Jones Cranes, part of the 800 Group, both have spent the past couple of years reaping themselves and putting the finishing touches to their competitive edges.

Acrow collected Coles along with Priestman Brothers, makers of crawler and lorry-mounted cranes, when it acquired the Steel Group. Today Coles accounts for about half of Acrow's U.K. turnover and three-quarters of its exports.

Coles is already the largest manufacturer of its kind in Europe and has publicly stated that its aim is to increase significantly its share of world trade in mobile cranes. It expects to overtake most of the U.S. and Japanese competition and establish itself alongside Grove of the U.S., currently the world's biggest producer.

A £8m. expansion programme is well under way at Coles factory, the Crown Works at Sunderland—the biggest construction equipment assembly site in Europe—and the company took advantage of the Government's Accelerated Projects Scheme to speed it up. The scheme has enabled the concern to condense a five-year programme into four years.

Coles admits it lost ground in world markets because it concentrated on diesel electric mobile cranes at a time when the customers were turning to diesel hydraulic types.

To-day Coles produces around 1,200 cranes a year and is in fifth place in the world league table behind Grove (2,500), Kato and Tadano of Japan (2,000 and 1,500 respectively) and P and H of the U.S. (1,300).

The Crown works account for about 60 per cent of Coles' output. A new £1.5m. fabrication shop has been installed and by 1980 the remainder of the plant will have been completely modernised. The idea initially has been to step up production from 70 cranes a month to 100 a month. And it has also enabled Jones to offer an improved spares supply and service back-up.

Advantages of scale to benefit from. And it has also enabled Jones to offer an improved spares supply and service back-up.

Jones and Coles are alike in that they both believe in going for a high added-value content in their products and they make a great many of the parts and components which go into their cranes—in Jones' case only 30 per cent of the components by cost are bought-in.

And Jones, too, has pulled forward its four-year investment programme because of the incentives offered by Government aid schemes.

Jones sells more than 60 per cent of its output overseas and the sad fact for Britain is that Jones and Coles often clash head-on in export markets. Mr. Walsley says that Jones concentrates particularly on those areas which obviously can afford to buy its cranes rather than the developing countries—“there is no point looking for business in countries which have deep balance-of-payments problems.” The selling line used by Jones is a hard one. “A crane is not all that expensive an animal yet it brings immediate capital returns because it makes money as soon as it is put on site. It creates wealth right away,” Mr. Walsley points out.

Essential

For the crane makers export is essential in current circumstances because demand in the U.K. and Europe generally, is so terribly flat. An indication of the problems was given earlier this year when Richards and Wallington Industries, the biggest U.K. crane hire group, revealed that the slump in the construction industry in the London area had forced it to cut its already depleted crane fleet from 800 to 170 in that region.

In those circumstances, the crane manufacturers' current cry that the hire companies should charge the kind of prices which would enable them to replace their fleets more regularly hardly seems likely to meet with a positive response. Richards and Wallington also has an interest in crane-making

Fifth

Like Coles, Jones Cranes emerged from a grouping of old-established businesses, including British Hoist and Crane and Crane Travellers. Putting the three 800 Group crane concerns together should give the group a better market penetration, says Mr. Alan Walsley, the managing director. It will be easier to promote the range Jones offers and there are also

Strong market for loaders

THE CRUCIAL FACTOR in the development of the lorry loader as a major piece of mechanical handling equipment remains the human one. Both the cost and the fallibility of manual loading and unloading operations has created the need for a more efficient system, but a change of this magnitude is bound to create problems.

The somewhat haphazard nature of handling building materials, with each sector or even company developing its own methods, has meant that the lorry loader needed to be as adaptable as possible. Loose materials have been one of the major problems, but the trend towards unit loads is now a natural progression.

It is now more than ten years since the market for lorry loaders began to develop strongly, although the initial demand was slow, perhaps as a result of insufficient marketing pressure. But as labour costs have risen and the losses from breakages have become increasingly unacceptable, demand has risen steadily.

In practical terms, companies have seen their profits being eroded by the increasing cost of deliveries, and although a lorry loader does reduce payload on a vehicle, it is now firmly established that overall costs can be substantially reduced by their use.

The growth of the market for lorry loaders has been increasing at the rate of around 16 per cent a year in recent times, according to one of the major suppliers. The major users remain the timber and brick industries, and in the case of the latter, the incidence of damage is thought to have fallen substantially, although again there are no official figures to bear this out.

According to a survey carried out by Construction News, the traditional gang of four men takes around two hours to off-load a delivery of 5,000 bricks manually and breakages are often as high as 20 per cent, and seldom less than 5 per cent. Ten

years ago, top quality facing bricks fetched around £40 per thousand but to-day the same bricks would cost around £130.

In 1967, a load of 5,000 bricks would have cost about £6, including labour, and 10 per cent. breakages, to offload, to-day the same manual offloading, using the same method, would be £36. To these figures must be added the considerable increases in delivery vehicle demurrage. A decade ago this would have amounted to perhaps £2.60 an hour, only a fraction of to-day's costs.

With the adage that time is money, more true to-day than ever before, this factor has been crucial in the move towards more efficient, faster, less damaging and safer handling. This last factor is one which was considered only more recently, not only in terms of actual injury from accidents, but progressive harm to those involved in heavy lifting work over a number of years.

Again, it is impossible to even estimate the cost in terms of time of caused by heavy lifting of this kind, but with labour costs at a premium it is clearly a considerable and unnecessary waste in many cases.

To add to the advantages offered by mechanical handling, the cost of lorry loaders has fallen in relation to the overall cost of delivery vehicles. In 1967, for example, a lorry loader would have represented around 35 to 40 per cent of the total cost of the vehicle, while to-day the figure is nearer 20 to 25 per cent and for the very large vehicles even lower. Admittedly this does not take into account loss of capacity, but the increase in the size of vehicles has clearly offset this to some extent.

While these arguments in favour of lorry loaders are now fairly widely accepted, there are some fairly weighty objections which continue to be voiced against the system. These are mainly directed at the lack of standardisation of loads, which can mean that expensive hoisting equipment is left idle or is inefficiently used. Although some progress is being made here, considerable criticism is being directed at materials suppliers for offering a vast range of differing size unit loads.

The problems which arise once the load has been delivered include the inability to break down these loads into easily manageable units, non-standard packages and non-compatibility of site plant.

It is clear that a far greater degree of co-operation between suppliers and contractors will be necessary in future to overcome these difficulties. Although it will not be easy to solve the problems posed on standardisation, there are other areas such as site organisation where some progress can possibly be made more easily.

John A. Trotman

CONSTRUCTION PLANT XI

Excavators challenge the U.S.

OVERSEAS world markets is an established character of the British excavator trencher manufacturing industry. Over the last three years, demand for trenchers has been forced on many companies by the face of an unprecedented boom in home demand. This ability to survive and flourish in this sector is important to the overall success of construction equipment in the world.

Excavators and trenchers ranked second only to earthmoving and levelling equipment in the construction industry league table from the Government's Business Monitor. Total sales of excavators and trenchers reached £118m. in 1976, representing 15 per cent. of the total British market for construction equipment.

Leaders in this sector of the industry regard 1975 as a notably good year for home sales, although total units sold only reached the peak of 1973. Of 2,550 excavators of the all-hydraulic type were sold in Britain.

Estimates

An idea of how low demand in this sector is given in provisional estimates of these excavators in 1977. At 1,200 units, the low reflects the depressed state of the construction and mining industries. The depressed state of the economy is linked with the recent decline in economic activity. But more specifically, the construction industry sector suffered heavily at the hand of government public expenditure cuts. These have slowed down road building schemes and brought a virtual halt to the building of new service facilities such as works, new sewage treatment and other works called for the use of the ubiquitous trenchers.

In an industry, like the trencher sector, which is so dependent on the whims of Government, it has to be taken into account that production capacity is often reduced during periods of recession. Action has been taken by J. C. Bamford and the top two contractors in the 360 deg. excavator market in Britain. As well as

aiming to capture ever greater shares of the estimated 37,000 unit annual world excavator market, these companies have both attempted to broaden their appeal to customers at home and overseas.

Hymac has made perhaps the greatest change to its operations, with an agreement signed in January to sell West German Demag excavators in Britain. The Hymac company, part of Powell Duffryn, depends heavily on excavator production. The declining home market had started to affect the company's fortunes in Britain.

The agreement to sell Demag excavators extended Hymac's coverage of demands in the construction industry. The managing director of Hymac, Mr. Edward Darrell said the arrangement opened considerable prospects in Britain.

The company's reasoning is that previously it had been unable to offer a complete range. However, it still won 34 per cent. of the U.K. market for 360 deg. excavators of all types.

A high proportion of this market share, however, had been won by Hymac through its 10 to 12 tonne excavators, which gave Hymac 63 per cent. of the British market in this size of machine. The company now believes and hopes that this over-dependence on one type of machine will be reduced with the Demag agreement.

The agreement gives Hymac access to the complete range of machines from 30 to 110 tonnes. This will complement the company's own range from 10 to 30 tonnes. Later next year, Hymac plans to introduce one of Demag's biggest machines to the British market, weighing 210 tonnes.

Not surprisingly these machines are not destined for routine site work. But their significance for the home market should not be overlooked on the grounds that they are specialist excavators.

Hymac believes a growing sector of the home excavator business will be with major contractors working for the National Coal Board on open cast mining projects. Previously uneconomic sites are revived and new areas uncovered as coal seams more and more attractive as an energy source.

Many other excavator manufacturers agree that open cast mining is turning increasingly to hydraulic excavators

with their greater flexibility and ease of maintenance, while walking draglines, conventionally used in open cast work, continue to work on over-burden stripping and coal recovery.

Hymac does not believe the excavator will ever displace the dragline, and clearly this is unlikely when dragline bucket capacity can be up to 35 cubic metres compared with around 5 cubic metres for a 50 tonne excavator. "While there is a place for both in the growing amount of open cast work, contractors have shown a fairly significant increase in interest

in using excavators, particularly over the past 12 months," said Mr. Darrell.

Hymac also recognises that if there was a sudden revival in domestic demand, it could place a serious burden on installed capacity in Britain. The company was doing as much as it could in the circumstances but it doubted whether British makers could cope with a sudden vastly increased demand.

Hymac had made substantial investments at its Rhymney, South Wales main factory and at a smaller plant in Essex.

AS WITH other sectors of the construction equipment market, the companies which make crushing, pulverising and screening equipment report mixed fortunes. The capital cost of much of the equipment is high, and the depressed home market is unlikely to encourage much investment.

However, exports can and do take up—at least in the short term—some of the slack. A growing world population and increasing urbanisation mean that although projected growth rates world-wide have slipped somewhat, they are still standing at a healthy 5 per cent. or so.

The types of equipment lumped together under the crushing, pulverising and screening label are for breaking down rock into sizes suitable for road-making, or for making into asphalt. Their primary marketing feature is toughness; the crushing and pulverising plant must be capable of continuous and infinitely repeated pounding actions aimed at reducing hard rock to small pieces.

The human equivalent of these machines is the man with the sledge-hammer—seen in mass version in the prison chain gang. To-day the machines turned out by the major manufacturers are in many cases as productive as a hundred chain gangs.

Innovation and increasing productivity are necessarily the

name of the game in this sector of the market, because competition from American and European manufacturers is fierce. While they do complete in the home market—and British manufacturers are becoming gradually accustomed to viewing the EEC as an extension of the domestic market—they are, more significantly, in competition for the big export markets, where indigenous companies are either small or just beginning.

"It used to be that we had one executive," said one executive, "but now the really fresh markets are full of groups from Europe and America, jostling each other for trade. The fact that we were very often there with the Empire doesn't really give us much of an edge any more—if any."

Last year's report by the Construction Equipment and Mobile Cranes Sector Working Party of the National Economic Development Council highlighted possible weaknesses in the international strategies of many British manufacturers in this area.

It said: "The essentials for sales and success are product quality/performance, delivery, after-sales service, spares back-up, suitability and possibly price. There is evidence to suggest that, in spite of excellent products in earthmoving equipment, excavators, cranes, crushing equipment and road maintenance plant, the U.K.

with some important exceptions, is weak in terms of world distribution, service, spares and back-up. In addition, there are weaknesses in world market research and studies of world needs in relation to the products being made and designed."

While the NEDC warnings are obviously salutary, there is a certain temptation not to heed them, or to downgrade their importance. Even with increasing American and European competition, British firms are very strong indeed in certain areas of the world, notably the Middle East and West Africa, especially Nigeria. The Far East—the Philippines and Malaysia are often quoted—and South and Central America, together with the Caribbean, are similarly good growing markets.

Strength—and a continuing boom in markets where one is well placed—are a mixture which might encourage a certain complacency. Nevertheless, some firms are talking of establishing permanent full-time sales representatives in the Middle East and in West Africa where they have not had one before; others talk of upgrading their sales pitches to these countries.

A typical ratio of exports to domestic sales in this sector would be 70:30; the recent (and continuing) recession in the domestic construction industry will have helped push up the

and abroad. Clearly there will be no such dovetailing of supply and demand in Britain when the construction industry picks up, as expected during the middle of next year, unless there is an increase in imports or a decrease in exports.

Balancing such a prospect are the efforts of companies with a strong export performance. Hymac exports over 60 per cent. of its product output and J. C. Bamford exports around 70 per cent., with prospects of even greater exports as the company

opens up the U.S. market for the first time.

Anthony Bamford, the company's chairman, is convinced that the U.S. is now the major growth area for construction equipment. So far JCB has not attempted to sell its range of conventional 360 deg. all-hydraulic excavators in this market. Instead, the company has entered the U.S. with its back-hoe excavator loader machine. This is now getting into the construction industry "everywhere," said Mr. Bamford.

The sales campaign began in

1976 with US sales of \$2.5m. By the end of 1977 sales for this category of excavator will have quadrupled to \$10m.

Next year, JCB is aiming to win 10 per cent. of the U.S. market for back-hoe excavator loaders, with estimated sales of \$20m. The competition is intense, with five of the top names in the industry fighting hard to keep JCB out. Massey-Ferguson, Ford, John Deere, International and Case would all rather not see JCB in their home territory.

L.McL.

the Screen Ranger and the Crush-Ranger.

The company will design, manufacture, erect and commission complete quarrying plants which can mean the equivalent of a medium-size factory. At the smaller end of its output it makes a variety of vibrating screens, like the Grizzly, the Rapide and the Powerflow.

Ghodwin Barsby, Braham Millar and Peggson are all competitive across most of the Parker range. Peggson has a wide variety of crushers, including two jaw crushers; Braham Millar manufactures quarry plant, taking in the products made by the various companies within the group; Ghodwin Barsby specialises in asphalt plant and has a range of crushers and of screens. All are large enough, either through steady growth (Parker), merger (Braham Millar) or by being a subsidiary of a large corporation (Ghodwin Barsby) to compete successfully in international markets.

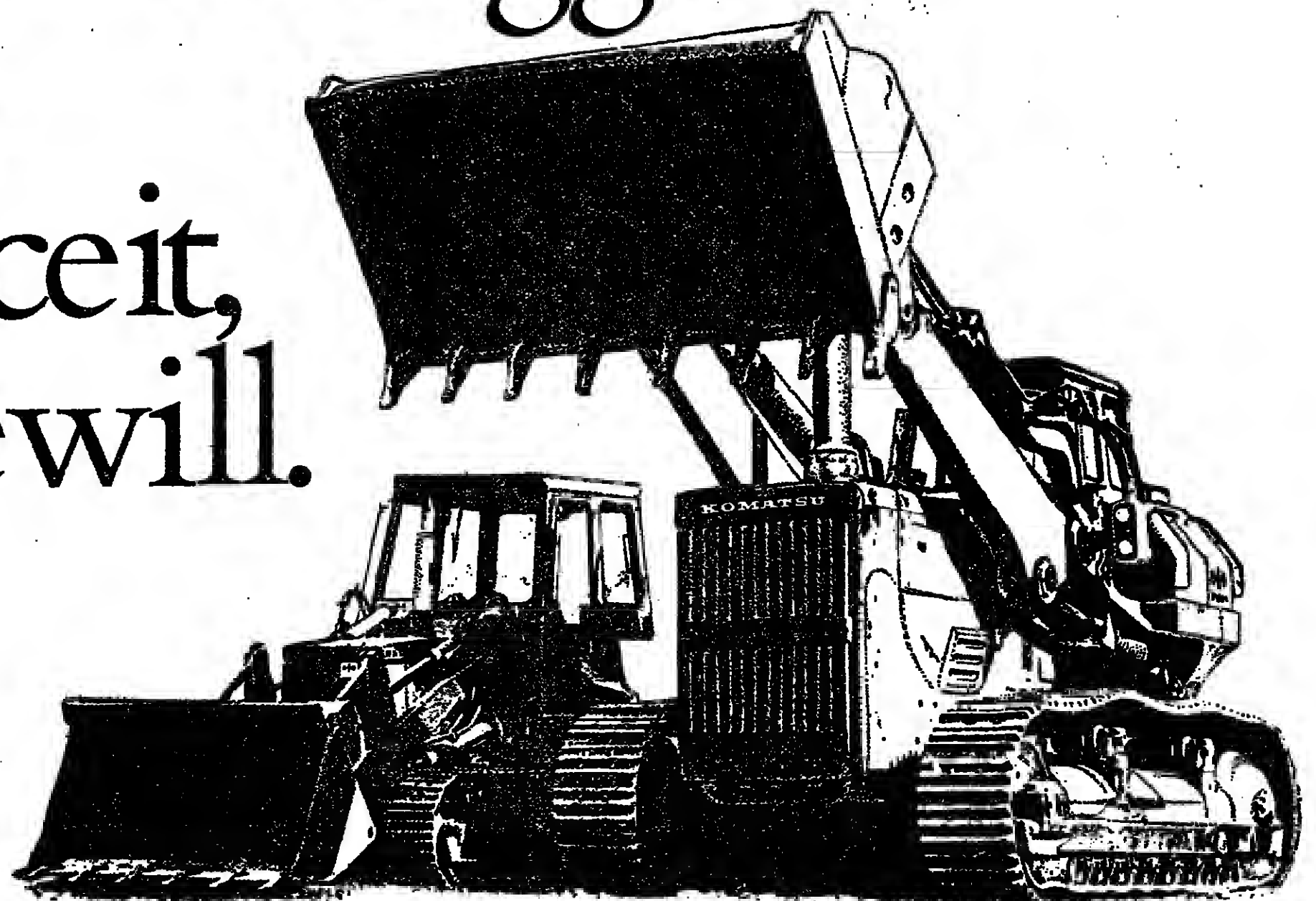
The biggest success of recent months, however, goes to Parker. The largest single order ever received by the Leicester group came from the Philippines in May this year. During the next 12 months, Parker is to supply 84 mobile crushing and screening plants, together with asphalt producing units, for large-scale roadworks in the Philippines. The order is worth £7m.

While the crushing, pulverising and screening plant sector, with sales (in 1975) of £37m, representing a 5 per cent. share of total construction equipment sales, is a relatively small yet relatively successful part of the market, it clearly is included in the NEDC strictures. The products as the report concludes, are generally good, but the competition is keen.

J.L.

Competition for screening plant

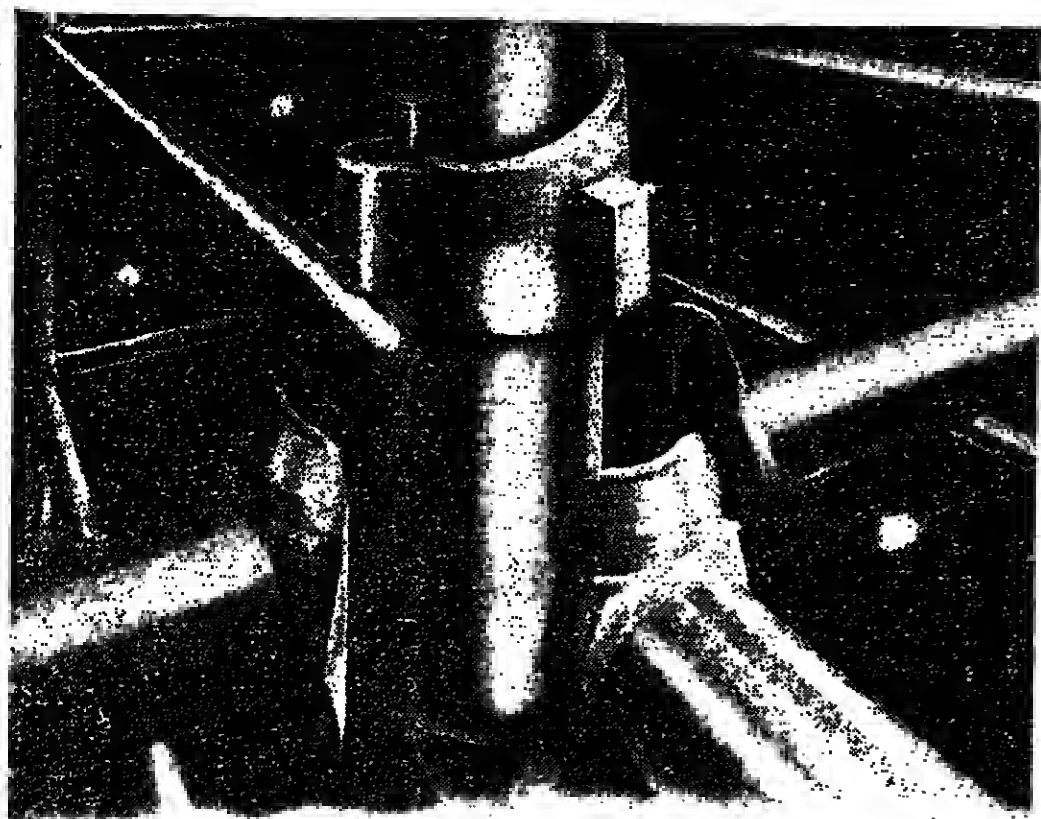
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CONSTRUCTION PLANT XII

The world scene



On these two pages
GEOFFREY OWEN
looks at the world
market and the
prospects for the
leading companies.

THE WORLD construction equipment industry presents a fascinating battleground in which about a dozen large American, European and Japanese companies are fighting for supremacy in virtually every significant market.

What makes the battle especially interesting is that the world market for construction equipment is in general an open one. In the main industrial markets there is little overt protectionism and not even much attempt by governments to favour their nationally owned suppliers in their public procurement. The principal customers are private enterprise contractors, some of which are themselves operating on an international scale. They are accustomed to look for the best buy, irrespective of the source of the product or the ownership of the supplying company.

A second feature of the industry is that economies of scale in manufacture are important. Although the numbers of units involved are small compared with, say, passenger cars—world demand for crawler loaders, for example, is probably around 50,000 units per annum—there are significant cost advantages for the company producing a few thousand units a year instead of a few hundred.

The structure of the industry is unusual in that it has one clear leader. Although Caterpillar does not dominate the field to the same extent as IBM does in computers, it is the market leader in most of the sectors where it competes. Its rivals freely acknowledge that Caterpillar has set standards—in engineering, in production efficiency and above all in the strength of its dealer network—which everyone else is trying hard to emulate.

Network

Caterpillar differs from many of its competitors in devoting virtually its entire business to construction equipment; although it has diversified into fork-lift trucks and is an important supplier of diesel engines to the automotive industry, it does not have any stake in farm machinery.

It has a network of manufacturing plants in the U.S., in Europe and—through a partnership with Mitsubishi—in Japan; these plants are organised and managed on an integrated basis to secure the best possible economies of scale. As the accompanying table shows, the

THE MAIN CONTENDERS AND SOME OF THEIR PRODUCTS

	Backhoe loaders	Crawler loaders	Wheeled loaders	Hydraulic excavators	Heavy dump trucks	Graders	Scrapers
Caterpillar							
Komatsu							
Case/Peclain							
John Deere							
Massey-Ferguson							
Isuzu, Hitachi							
Ford							
Clark							
General Motors							
Fiat-Allis							
Valvo							
Orestein & Koppel							
Lombard							
Euclid/Daimler-Benz							
J. C. Bamford							
Leyland							
Hyundai (Powell Duffryn)							
Prismac (Acrux)							

The above chart, though not comprehensive, illustrates the competitive situation in some of the main sectors. There is a wide range of products within each sector, so that in, for example, wheeled loaders, companies may specialise in the heavier machines and not compete directly against those offering only the smaller equipment.

only high-volume sector in which Caterpillar is not represented is the backhoe loader (a product which shares some common components with the farm tractor) and there is often speculation that this gap will one day be filled.

Number Two in the world league, and a fierce rival to Caterpillar in products and markets, is Komatsu of Japan. One important difference from Caterpillar is that it operates mainly from a Japanese manufacturing base. While it has entered into manufacturing ventures in countries which prohibit direct imports (such as Brazil and Mexico), Komatsu's attack on the North American and European markets has been conducted with products made in Japan.

For Komatsu the economies of scale which Caterpillar has sought on an international scale have been achieved largely within Japan; a network of factories, with components and machines rationalised between them, is the basis for Komatsu's manufacturing efficiency. If Komatsu is to increase significantly its share of North American and European markets a local manufacturing presence may at some stage become essential; the recent appreciation of the yen may force the Komatsu management to take the decision earlier than they would have liked.

The structural changes which have been going on in the rest of the industry can be seen as a series of manoeuvres aimed at catching up with Caterpillar. The strategies being followed can best be illustrated by four key events which have substantially altered the structure of the industry during the past three years.

The first was the creation in 1974 of a joint construction equipment company between Fiat of Italy and Allis-Chalmers of the U.S. Fiat had always been a major force in the European market, especially with its small crawler loaders and to a lesser extent with its hydraulic excavators. But it lacked the range of equipment which gave Caterpillar such an advantage in competing for customers and dealers; in particular it lacked the heavier machines which had been mainly developed in the U.S. In addition, it lacked a presence in the U.S. market itself. The pooling of interests with Allis-Chalmers neatly solved most of these problems: it put Fiat in a position where it could challenge Caterpillar on its own home ground and put up a stronger fight in Europe itself.

The second event, in the same year, was almost the mirror image of the Fiat-Allis deal—the purchase of Massey Ferguson of the Hanomag construction equipment business in Germany. Here was a North American company, probably the world leader in farm machinery (certainly the strongest outside the U.S.), which had decided during the sixties to invest on a large scale in construction equipment. It had built new factories and developed new products, but the Hanomag purchase gave it a position in the European market which would have taken a very long time to develop on its own.

As Mr. Albert Thornbrough, president of Massey Ferguson, put it recently "Hanomag gave us much larger crawler loaders, crawler dozers and excavators and virtually a new range of wheel loaders. With the Hanomag purchase we acquired a proved product line which pulled our sales capability ahead by four years." Above all, the deal reflected Massey Ferguson's determination to become a "full-line" supplier,

able to provide its customers with all their requirements. The Hanomag deal signalled the advance of the full-line North American company. Did it mean that the European specialist was doomed? That view seemed to be confirmed three years later when Poclair of France was forced into an alliance with another American concern, J. I. Case, a subsidiary of Tenneco.

Poclair was the outstanding example of the European specialist, which had built up a position of unchallenged world leadership in one major product, hydraulic excavators. Although other companies, including Caterpillar, had moved into the hydraulic excavator business, Poclair remained easily the world leader. Yet the recession of 1974-75 brought about a financial crisis. The company had over-extended itself and it urgently needed a new injection of funds. After attempts by the French Government to find a domestic solution had failed, an agreement was reached with Case for the American group to acquire a 40 per cent stake in Poclair. Although the Battelle family, the original owners, have retained a substantial stake, and other French shareholders,

including Renault, have been brought in, there is no escaping the fact that Poclair has passed into the orbit of an American multinational. For Case the move was entirely logical, since it filled one important gap in its range—hydraulic excavators—and the combined sales of the two companies are claimed to represent the second largest construction equipment enterprise in the world.

Deal

The fourth event, less widely publicised, was the purchase by Daimler-Benz of Germany of the Euclid earthmoving equipment business from its American parent, White Motor. Besides providing Daimler-Benz with its first manufacturing base in the U.S., this deal marks the German company's entry into the construction equipment business. Euclid, which has plants in Europe as well as the U.S., is one of the leading producers of heavy dump trucks; one of its main competitors is General Motors' Terex range.

Daimler-Benz could conceivably use this acquisition as a springboard for further expansion in construction equipment, possibly acquiring some of the German specialists in the field, including Renault, have been brought in, there is no escaping the fact that Poclair has passed into the orbit of an American multinational. For Case the move was entirely logical, since it filled one important gap in its range—hydraulic excavators—and the combined sales of the two companies are claimed to represent the second largest construction equipment enterprise in the world.

How far the European companies will take the path of rationalisation—as Fiat with Allis-Chalmers—is uncertain. Volvo was one of the companies involved in the discussions over the future of Poclair; the two companies have a marketing agreement in Scandinavia. At the late J. C. Bamford of the U.K. to interest the French authorities in a European solution, a North American solution. But it is the American companies which tend to have longer purses; their effort to enlarge their share of the construction equipment market will continue to have a decisive influence on German specialists in the field, structure of the industry.

FIAT

AFTER SEVERAL years of intermittent courtship, the marriage between Fiat of Italy and Allis-Chalmers of the U.S. in construction machinery was settled in the middle of 1973. The two companies agreed to pool their construction equipment interests in a new enterprise, Fiat-Allis, which formally into existence in 1974. Fiat held the majority stake, with 65 per cent of the equity; this was later increased, at the start of 1977, to 77 per cent.

J. I. CASE

J. I. CASE is a subsidiary of Tenneco, a huge American conglomerate whose interests include oil and gas production, natural gas pipelines, automotive components, chemicals, packaging and shipbuilding. One of the oldest American farm machinery companies—it began making threshers in 1842—Case has been moving rapidly in the last few years to build up its stake in the world construction equipment business. As in the case of Massey Ferguson, this has been achieved partly by acquisitions and partly by new product development. Just as Massey's purchase of Hanomag in Germany greatly strengthened its position in Europe, so Case's decision to acquire 40 per cent of Poclair, the French hydraulic excavator manufacturer, at a cost of \$40m., represented an important move in Case's worldwide strategy in construction equipment.

Better that deal, which was announced at the beginning of this year, Case had been putting considerable effort into other parts of the construction machinery market. In the backhoe loader market, particularly, the introduction of the 580F and the aggressive marketing which accompanied it was seen by its rivals as a sign of Case's determination to carve out a larger share of the business with a highly competitive range of products. This machine is built at Viterbo in France and uses engines and transmissions supplied by David Brown in the U.K. David Brown was bought by Tenneco in 1972 and forms part of a network

FIAT-ALLIS IN 1976

	Fiat-Allis Inc.	Fiat-Allis
Sales	\$308m.	\$298m.
Net income (loss)	(\$11.7m.)	\$15.6m.
Number of employees	5,106	6,042

The logic behind the merger was clear. To compete effectively against companies like Caterpillar there are two main options. One is to specialise in a narrow range of products; the other is to become a full-line supplier, preferably on a worldwide basis. Allis-Chalmers had

a good position in the market and was especially strong in the larger machine. Fiat had long been one of the leading European construction equipment makers, with particular strength in crawler loaders and dozers. The product ranges were complementary and pooling of resources would make it easier to attract deals of the highest calibre.

With sales of over \$600m. more than 11,000 employees, joint venture has a total of six factories—three in Italy, two in the U.S., one in the U.K.—and one in Brazil. In line with established patterns in industry, production of machines and components are to a large extent rationalised between them.

In the U.K. the Essandine factory in Stamford, Lincolnshire, had originally been acquired by Allis-Chalmers in 1950 for the manufacture of farm machinery. Ten years later Allis-Chalmers started making wheel loaders at Essandine and this became the factory's main line, with a wide range of machines and a substantial export trade. Within Fiat-Allis the Essandine factory has made the European production centre for articulated wheel loaders, producing in excess of 1,000 units per annum. The three Italian factories—Grugliasco, Lecce and Casale—specialise in respectively hydraulic excavators, crawler loaders and crawler tractors. The factories in Illinois produce bigger machines, including scrapers and graders and larger crawler loaders and wheel loaders. The Fiat-Allis partnership consists of two legal entities: Fiat-Allis Inc., a U.S. corporation, embraces the two U.S. factories, the Essandine plant in the U.K. and Cusano in Italy. Fiat-Allis BV, a Netherlands corporation, takes in the five European plants. Total sales in Europe for Case this year are expected to be about \$300m. in 1978.

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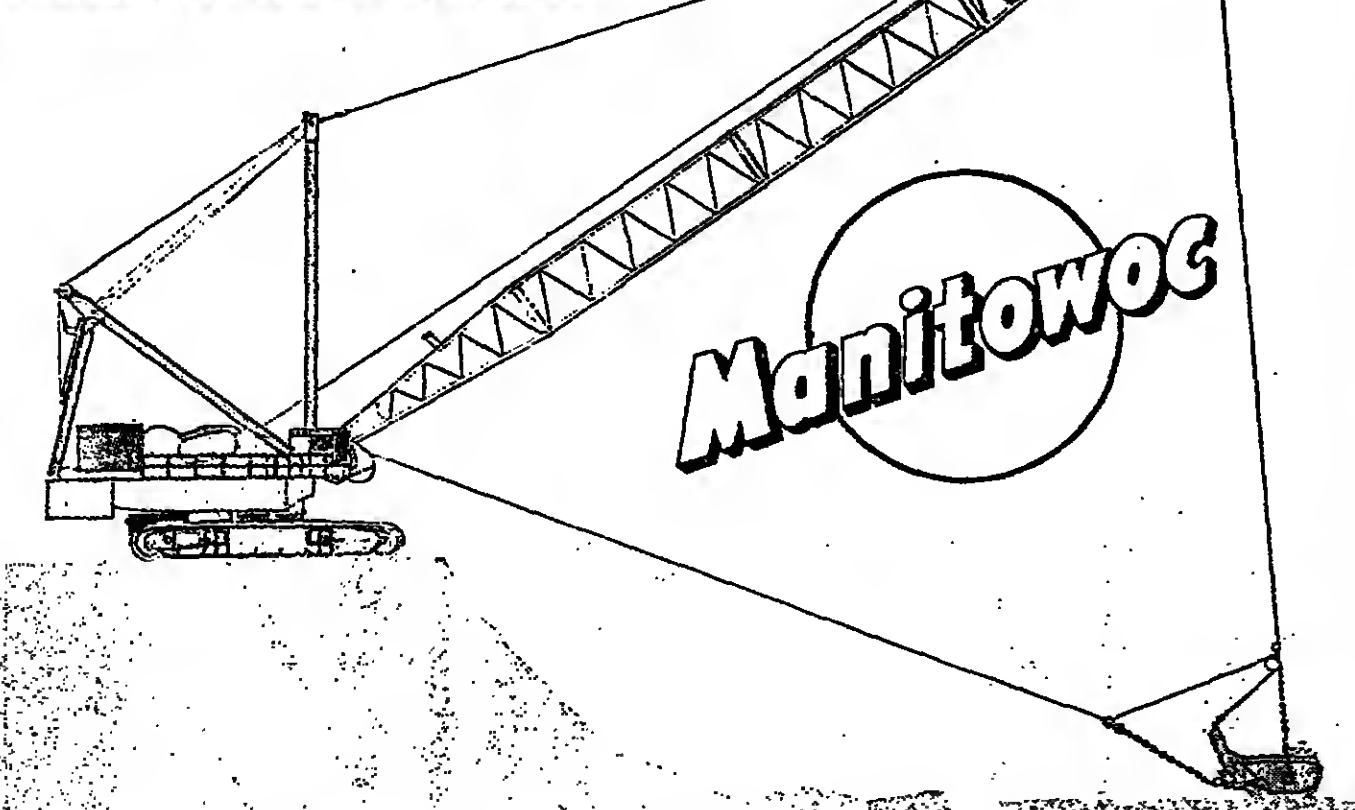
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CONSTRUCTION PLANT XIII

JOHN DEERE

JOHN DEERE IN 1976		
Sales by area	\$m.	% of total
U.S.	2,160	69.0
Outside U.S.	974	31.0
Sales by product		
Farm equipment	2,523	80.6
Industrial equipment	452	14.4
Consumer products	159	5.0
Total sales	3,134	100.0
Net income	242	
Number of employees	55,242	

JOHN DEERE, the largest of North American tractor and machinery companies, was a few years ago a less familiar name in Europe than Massey-Ferguson and International Harvester. Although Deere bought a German company, Lanz, in Mannheim in 1956, its operations produced a satisfactory return for years. In 1971 the company attempted to make up for time by agreeing to pool its machinery interests with Massey-Ferguson and International Harvester. Since Deere has pushed ahead strongly on its own.

Other farm machinery companies, Deere started in construction equipment on a large scale. It is only in the last few years that the company embarked on a major investment in new models and manufacturing facilities, streamlining itself as a plant competitor to Caterpillar across a broad range of products.

In 1974 a number of new models were unveiled, including crawler loaders, excavators, scrapers and graders with higher horse power than those which Deere had traditionally manufactured. Mr. William A. Hewitt, chairman of the company, said at the time that the company aimed to achieve sales of \$1bn. in construction equipment by 1980; this year sales have been running at an annual rate of around \$800m. A new factory was built on a greenfield site at Davenport, Illinois, near the company's home base of Moline, and this came on stream last year. Together with the enlargement of the existing factory at Dubuque, Iowa, the space available for manufacturing industrial equipment has doubled in the past three years.

Within Europe Deere has factories in France and Germany making backhoe loaders, small crawlers and wheeled loaders. It also has an arrangement for Atlas in Germany to manufacture hydraulic excavators, which are sold under the Deere name and use Deere engines. Until recently Deere's main strength in Europe has been in the smaller end of the business, but a number of larger machines are now being introduced from the U.S. as the new models become available. This is part of the continuing drive to establish John Deere as a full-line supplier to world markets.

MASSEY FERGUSON

MASSEY-FERGUSON followed a more consciously international policy during the 1960s than its North American rivals in the farm machinery industry, and it has an exceptionally strong manufacturing base in Europe. Last year 75 per cent of the company's tractor production came from its factories in Europe—half in the U.K., a quarter in France and the remainder divided between Germany, Italy and Spain. Similarly in construction equipment, Massey-Ferguson has built or acquired a number of factories in Europe: the biggest of these is the former Hanomag factory in Hanover, acquired in 1974.

Like other tractor producers, Massey-Ferguson first entered the construction equipment market with the backhoe loader, which shares some common components with the farm tractor: this is a high volume sector of the market in which Massey-Ferguson has a strong market position in the U.K., France and other European countries. But, as it had done in the farm machinery business, the company was determined to become a full-time supplier. The range of products was steadily broadened, partly by acquisition. In the early 1960s Landini, an Italian producer, was bought and its crawler tractors were adapted for the construction equipment market.

New factories were built at Apicilia in Italy and at Knowlsey in the U.K. the first co-operation with the production of loaders and hydraulic excavators, the latter on backhoe loaders in place, a steady increase in market share would be achieved. "Our long range planning in 1974 which pushed Massey-Ferguson into the front 1983, when all our new products are in the market, we will be approaching a sales volume of more than \$750m., almost twice the level it achieved in 1976."

shorter time than could have been achieved by internal product development. Steps have been taken to rationalise production so that Hanover now produces the range of wheeled loaders and crawler loaders and dozers over 100 horsepower, while in Italy the Apicilia and Ravenna factories produce the whole hydraulic excavator range and crawler loaders and dozers under 100 hp. Massey-Ferguson's construction equipment division draws on components used in farm machinery, notably, of course, Perkins diesel engines.

Mr. Albert Thornborough, president of Massey-Ferguson, said earlier this year that 29 new products would be launched over the next three years and that, with the production capacity and distribution system now in place, a steady increase in market share would be achieved. "Our long range planning in 1974 which pushed Massey-Ferguson into the front 1983, when all our new products are in the market, we will be approaching a sales volume of more than \$750m., almost twice the level it achieved in 1976."

MASSEY-FERGUSON IN 1976

Sales by area	\$m.	% of total
North America	855	30.9
Europe	890	32.1
Rest of world	1,027	37.0
Sales by product		
Farm machinery	2,001	72.2
Industrial and construction machinery	360	12.7
Engines	340	12.3
Other	51	1.8
Total sales	2,772	100.0
Net income	118	
Number of employees	68,200	

KOMATSU

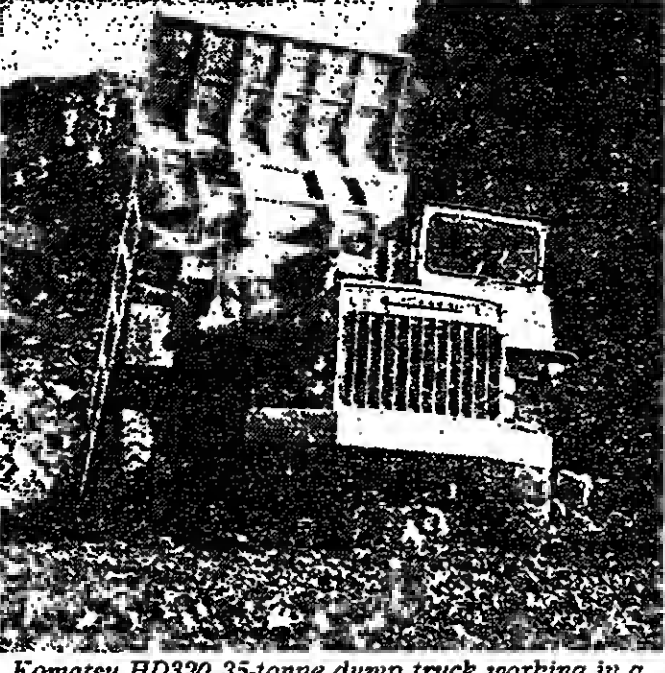
KOMATSU, widely regarded as the world's strongest rival in the construction equipment market, is the largest manufacturer in Japan. Like Caterpillar, it has concentrated most of its efforts in this sector. Its significant diversification into the manufacture and supply of machine tools and power gears (notably for the motor industry), and casting and forgings, but this can only be regarded as a true diversification since it has emerged naturally from its main manufacturing business and engineering know-how.

More important difference is that Caterpillar is that Caterpillar has not embarked on manufacturing except in the light of local regulations, as in Brazil, India and the rest of the world, including North and Western Europe, Japan has relied on direct sales from its Japanese manufacturing base.

The company will be reluctant to dilute the manufacturing base which this Japanese provides. It has five major plants in Japan, each specialising in particular machines or components, so that Komatsu wishes to establish itself on a significantly larger scale in Europe, it will need a high technical skill and some stage a manufacturing presence in the market, just as the American multinationals have done.

Unlike the Japanese car manufacturers, Komatsu is unlikely to be forced by protectionist pressures into local manufacture in North America or Europe. The company has deliberately spread its export efforts widely around the world, avoiding an undue concentration on any one market; about 20 per cent of its exports go to North America and about the same proportion to Western Europe. In any case the volume and visibility of imported construction equipment are hardly comparable to cars or TV sets. More significant for Komatsu is the appreciation of the yen against the dollar.

Komatsu's management regularly reviews the economics of overseas manufacture in the light of production costs, currency movements and marketing considerations. Some Japanese exporters had tended to regard a rate of ¥280 to the dollar as something of a critical point in these calculations: since the yen now appears to have broken decisively through that barrier the case for overseas manufacture may have been strengthened. In any case, it seems likely that if Komatsu wishes to establish itself on a significantly larger scale in Europe, it will need a high technical skill and some stage a manufacturing presence in the market, just as the American multinationals have done.



Komatsu HD320 35-tonne dump truck working in a limestone quarry in South Wales.

INTERNATIONAL HARVESTER IN 1976

Sales by area	\$m.	% of total
U.S.	2,458	83.0
Outside U.S.	2,030	37.0
Sales by product		
Trucks	2,310	42.1
Farm machinery	2,262	41.2
Construction and industrial equipment	668	12.2
Turbo machinery	247	4.5
Total sales	5,488	100.0
Net income	174	
Number of employees	97,550	

INTERNATIONAL HARVESTER

INTERNATIONAL Harvester spread its efforts among several major lines. Although it is the leading U.S. producer of heavy-duty trucks, it has generally run behind John Deere in the U.S. farm machinery market and some way behind Caterpillar in construction equipment.

As a full-line supplier, backed by considerable investment in local manufacturing facilities, International Harvester has long been a major force in the international construction equipment market.

In Europe the company has factories in the U.K., Germany and France which manufacture a wide range of equipment. It is especially strong in crawler loaders: last year saw the introduction of an important new model, the 165 crawler loader with a 14 cubic yard capacity, designed and manufactured in the U.K. for world markets. The U.K. is the main manufacturing centre for backhoe loaders and International Harvester had the crawler loaders, Germany for disadvantages of size and four-wheel-drive loaders and diversification, but few of the France for hydraulic excavators. In contrast to the bigger machines, including Caterpillar's specialisation, graders and scrapers, are supplied from the U.S. factories.

The new structure which has been introduced divides the company more clearly into five distinct businesses, each of them run by a management team which has a worldwide responsibility. These are trucks, farm machinery, construction equipment, turbo machinery and components.

To some extent these changes reflected the criticism that International Harvester had the disadvantages of size and diversification, but few of the France for hydraulic excavators. In contrast to the bigger machines, including Caterpillar's specialisation, graders and scrapers, are supplied from the U.S. factories.

CATERPILLAR IN 1976

Sales by area	\$m.	% of total
U.S.	2,097	41.6
Outside U.S.	2,945	58.4
Sales by product		
Construction and materials handling equipment	4,555	98.3
Other*	487	9.7
Total sales	5,042	100.0
Net income	383	
Number of employees	77,717	

one plant is the counterpart of the same machine made at any other plant; parts are interchangeable throughout the world.

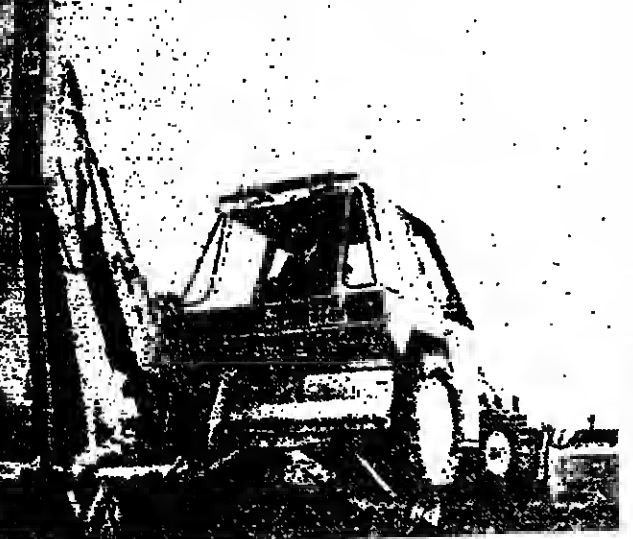
In the last few years Caterpillar has taken steps to strengthen its position at the smaller end of the construction equipment market. The entry into hydraulic excavators was one example, and Caterpillar has used its Japanese affiliate company (jointly owned with Mitsubishi) as the source for some smaller crawler and wheeled loaders for European and other markets.

At the same time the company has been engaged on an ambitious programme to modernise its manufacturing facilities and improve the design of its products. The recently introduced D10, said to be the world's largest bulldozer, is the result of several years' work and involves a radically different design approach. Powered by a 700 hp diesel engine and weighing some 90 tons, it has been designed to achieve big gains in productivity on large earthmoving projects. It is a sign of Caterpillar's determination to maintain its leadership in an increasingly competitive industry.

KOMATSU IN 1976

Sales by area	\$m.	% of total
Japan	511	58.8
Outside Japan	566	41.2
Sales by product		
Construction machinery	1,025	74.5
Industrial vehicles*	93	6.7
Industrial machinery†	46	3.5
Others	210	15.3
Total sales	1,377	100.0
Net income	51	
Number of employees	22,599	

* Mainly forklift trucks.
† Mainly presses and machine tools.



The International Harvester 3500 loader backhoe, built at Doncaster, which is meeting with good response in export markets.

CATERPILLAR

MANAGEMENT of Caterpillar decided some 50 years ago the way to succeed in the construction equipment business was to specialise in it. Unlike domestic rivals such as International Harvester and John Deere, Caterpillar stayed out of the machinery and has never been tempted by the diversification of its sales last year were in construction machinery, engineering and materials handling equipment; the bulk of the remainder was in the diesel engine business, where Caterpillar is an established supplier to many manufacturers and other owners outside the construction equipment field.

Caterpillar's strategy has been to supply a full line of machines to its dealers and customers and to do so on an international basis. It has rarely used takeovers as a means of extending its product range; an exception was its move into forklift trucks in 1965 with the purchase of Towmotor. Normally Caterpillar has relied on its own product development to fill any gap in the range: in hydraulic excavators, for instance, a product which had been pioneered and largely developed in Europe. Caterpillar might have acquired one of the existing European suppliers, but it preferred to develop its own machines: they were introduced in 1973.

Caterpillar is one of America's biggest exporters, but since the mid-fifties these direct exports have increasingly been supplemented by a network of plants throughout the world. In Europe the first manufacturing plants were established in Newcastle and Glasgow in 1956. A few years later plants were built at Grénoble in France, Gosselies in Belgium and at Leicester.

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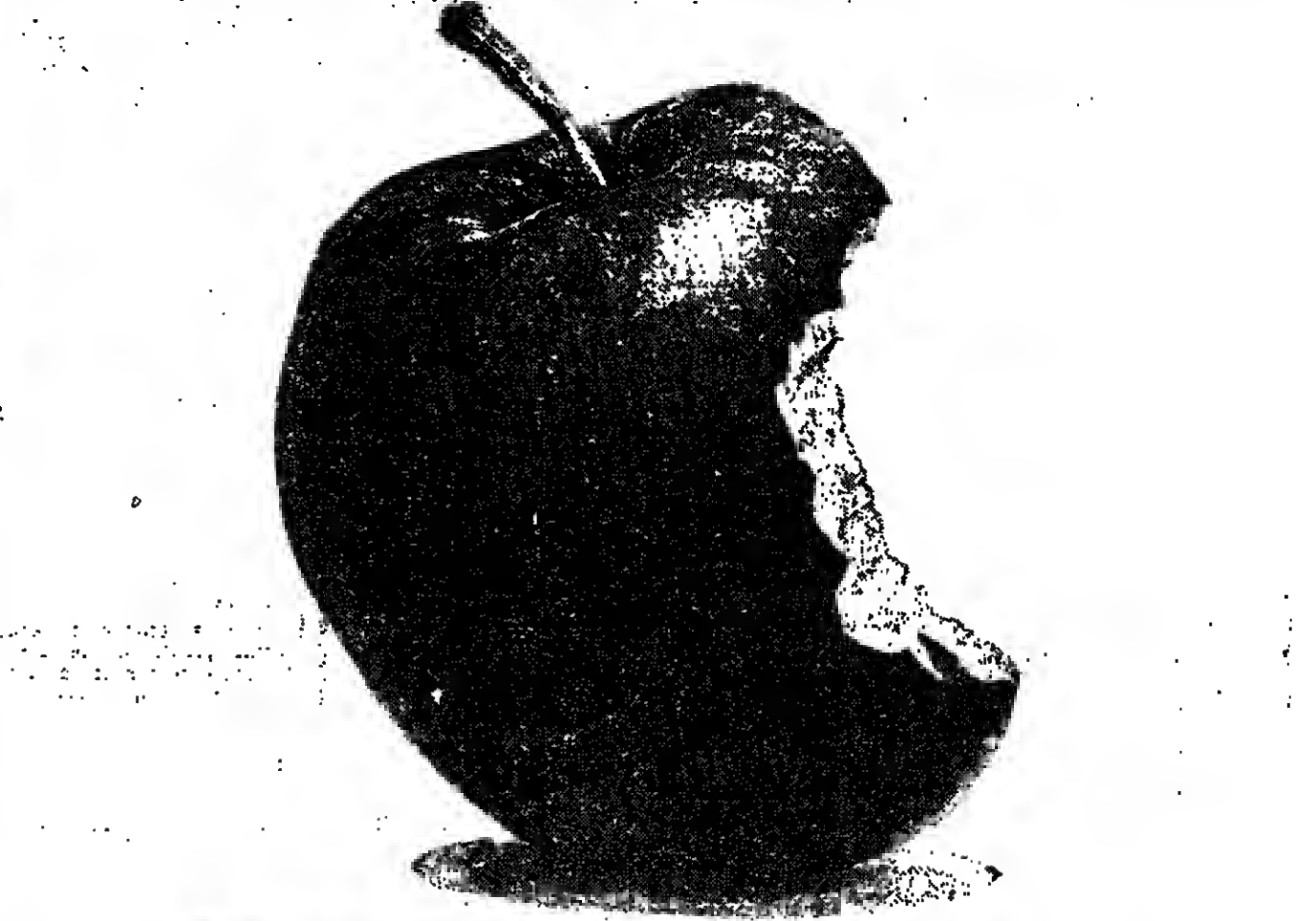
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CONSTRUCTION PLANT XIV

Britain's main groups

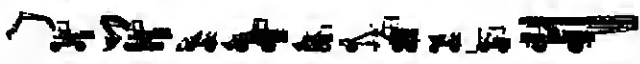
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On these two pages
KENNETH GOODING
reviews the structure
of the U.K. industry.

THERE ARE 170 companies in the U.K. which make and market equipment used in construction, civil engineering, open-cast mining and quarrying. But, as is usual in mechanical engineering, a small number of large companies are responsible for most of the activity. In the case of construction equipment, 17 companies account for 80 per cent of the industry's sales and 75 per cent of the employment.

The 17 are Acrow, which owns Coles Cranes and Priestman, Babcock and Wilcox, through its subsidiaries Blaw-Knox, Muir-Hill and Winget, J. C. Bamford, Barber-Greene, J. L. Case, Caterpillar, Fiat-Allis, Grove-Allen, General Motors Scotland, Hymac (owned by Powell Duffryn), International Harvester, Jones Cranes, a 600 Group offshoot, Leyland Special Products (Aveling-Barford, Aveling Marshall and Goodwin Barsby), Massey-Ferguson, Frederick Parker, Ransomes and Rapier and Ruston-Bucyrus.

This list throws into sharp perspective the importance of foreign-owned companies in this sector, particularly the North American construction equipment groups. The only major manufacturer from North America not having a base in Britain is John Deere. Clark Equipment is not on the list but it has a foothold in the U.K. through its 50 per cent holding in Cosmos Cranes, a company which makes mobile cranes.

It is estimated that the nine foreign-owned concerns listed control around 50 per cent of the U.K.'s construction equipment sales and account for more than half the exports. Eight of the companies are wholly owned by their foreign parents—Case, Caterpillar, Fiat-Allis, Grove-Allen, General Motors Scotland, International Harvester and Massey-Ferguson. The ninth, Ruston-Bucyrus is 51 per cent owned by Bucyrus Erie of North America with GEC having the rest of the shares.

Another feature of the U.K. construction equipment industry revealed by the "top 17" list is its closeness in many respects to the agricultural equipment industry. Crawler tractors, in-



Hymac Cleveland trencher working on pipeline trenches.

dustrial wheeled tractors and wheeled shovels all have their origins in farm machinery and continue to share some of its technology. A number of the major international construction equipment manufacturers with a broad product line are therefore also makers of farm machinery and diesel engines. This combination brings opportunities for the transfer of technology and more complete and intensive use of sales and service organisations.

Turn to the eight U.K.-owned companies on the list and it becomes apparent that in most cases these construction equipment businesses are contained within larger engineering groups.

Sometimes the development of the construction equipment divisions was a haphazard affair. But in recent years for some companies it has been much more a deliberate policy. Take the example of Jones Cranes. The 600 Group's involvement can be traced back to 1928 when what was then called George Cohen bought K and L Metal Works.

It was K and L which made the first Jones crane in 1936. The next acquisition did not take place until 1968 when 600 bought British Hoist and Crane, the "Iron Fairy" concern. This was followed in 1971 by the merger of Jones' own chassis-making company with Vickers Allwheel Drive, a merger which produced a concern which went on to make the first rough terrain crane.

The activities of the Indus-

trial Reorganisation Corporation in the 1960s also played a part in the way the construction equipment industry is currently structured. The IRC helped put together the Steel Group (owners of Coles Cranes, the leading U.K. producer of mobile cranes) and Priestman Brothers who put their crane interests together.

Then in 1972 Acrow was looking for a change of direction. Up to that time its chairman and major shareholder Mr. William de Vigier had been selling products to the construction industry but his philosophy was that anything Acrow made must be capable of being "made, sold and forgotten."

Not for him the service back-up demanded of construction equipment. But Mr. de Vigier had to change his tactics—or his group would have failed to continue to grow at the same pace. In the event he made a successful offer for the Steel Group which had received unwelcome overtures from a Slater Walker offshoot and preferred more friendly arms. After the merger the mobile crane business was separated from the fixed crane and hoist activities.

There are other U.K. companies now important in the industry which at one stage seemed almost certain for extinction. Ransomes and Rapier of Ipswich in 1972 was deeply in the red and its parent company at that time, Newton Chambers, was preparing to run it down. The closure was delayed by local protests and

brought big rewards. In 1976 Ransomes and Rapier accounted for £2.6m. of Central and Sheerwood's total pre-tax figure of £3.3m. Not only that, Ransomes has got back into the market for "walking draglines" for the open cast coal mining industry. These monsters are 55 feet long, have one arm which extends over 100 yards and can gulp 50-ton chunks of the ground at one go. The company built 55 of these monsters between 1939 and 1964

Chambers itself from the Central and Sheerwood Trust conglomerate. Central and Sheerwood put in a new chief executive and gave approval for an investment programme involving the redesign of the factory layout and the production processes.

Rationalisation of the product line, leaving Ransomes and Rapier with crawler cranes, hydraulic cranes and truck concrete mixers in its product range, and an attack on exports

is one of four groups in the world with the capability to make them. Ransomes is now back in this market because the oil crisis has completely changed the fortunes of the coal mining industry, thus for the equipment manufacturers who supply it.

Another company whose previous parent announced its intention to close only for a year or so to revitalise it, was Man Fowler, now known as Ave Marshall. The former owner, Thos. W. Ward, was about to close MP's factory at Gborough, Lincolnshire, in the U.K. would have its last British-owned manufacturer of crawler tractors result.

But Leyland Special Products itself given a new lease of life after the Government's rescue of British Leyland, in MF a chance to acquire production space in the Special Products paid £2.6m. MF and is currently in throes of a £5m. modernisation and re-equipment programme. The 800 have been given new production to make alongside the shovels and crawler tractors.

Closely related to the construction equipment sector is the plant hire industry. There are U.K. companies whose estimated combined turnover around £500m. This includes the construction equipment industry itself, employing 40,000 people and accounts for about 70 per cent of U.K. demand for construction equipment. The plant hire companies are also thought to own 75 per cent of the construction equipment in use in Britain.

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JONES CRANES

JONES CRANES is a 600 Group subsidiary, together with George Cohen Machinery, which markets the HLAB range of lorry loaders. Last year it made profits of £2.5m, on a turnover of £27m, compared with £1.7m. and £24.5m, respectively.

Jones has three factories. The main works at Letchworth, Herts., makes the diesel-mechanical strut jib cranes (Jones pioneered the development of the diesel-mechanical crane, producing the first at Letchworth in 1938). Small hydraulic mobile cranes are produced at the works in Compton, Berks., together with a range of builders' hoists and scaffold cranes. The larger capacity rough-terrain and truck-mounted cranes are made at South Marston near Swindon, Wilts.

The Compton works was the home of the Iron Fairy cranes and at Swindon the Vickers All-wheel Drive chassis and crane carriers were manufactured. Now all the three companies operate under one name—Jones Cranes.

Well over two-thirds of Jones' production is exported and in addition a joint venture with the Iranian Development and Renovation Organisation markets and

makes Jones cranes in Iran. This venture has made a significant contribution to profits in 1977, its first year of operation.

In his report in June this year, the 600 Group chairman Sir Jack Wellings reported that the crane companies' performance had shown a "substantial improvement" and they had been "most successful in increasing penetration of existing and new markets." He also remarked that "development of the strut and hydraulic telescopic cranes continues at a fast pace."

Behind this latter comment is the fact that in the past two years Jones has produced a range of lightweight diesel-hydraulic mobile cranes with telescopic jibs; 40-ton capacity diesel-mechanical cranes in mobile, crawler and high-level-bone types and the first 15-ton, fast-travel, rough terrain crane with swivel cab and all-round load slew.

On the lorry loader side of the 600 Group activity, George Cohen Machinery is sole agent for the U.K. and Ireland for the HLAB range and several 600 companies throughout the world act as distributors for this Swedish-built product.

HYMAC

HYMAC is a member of the Powell Duffryn Group; turnover for 1976-77 was £30m. or 10 per cent of PD's total sales. It employs 1,400, including 316 in parts and service support.

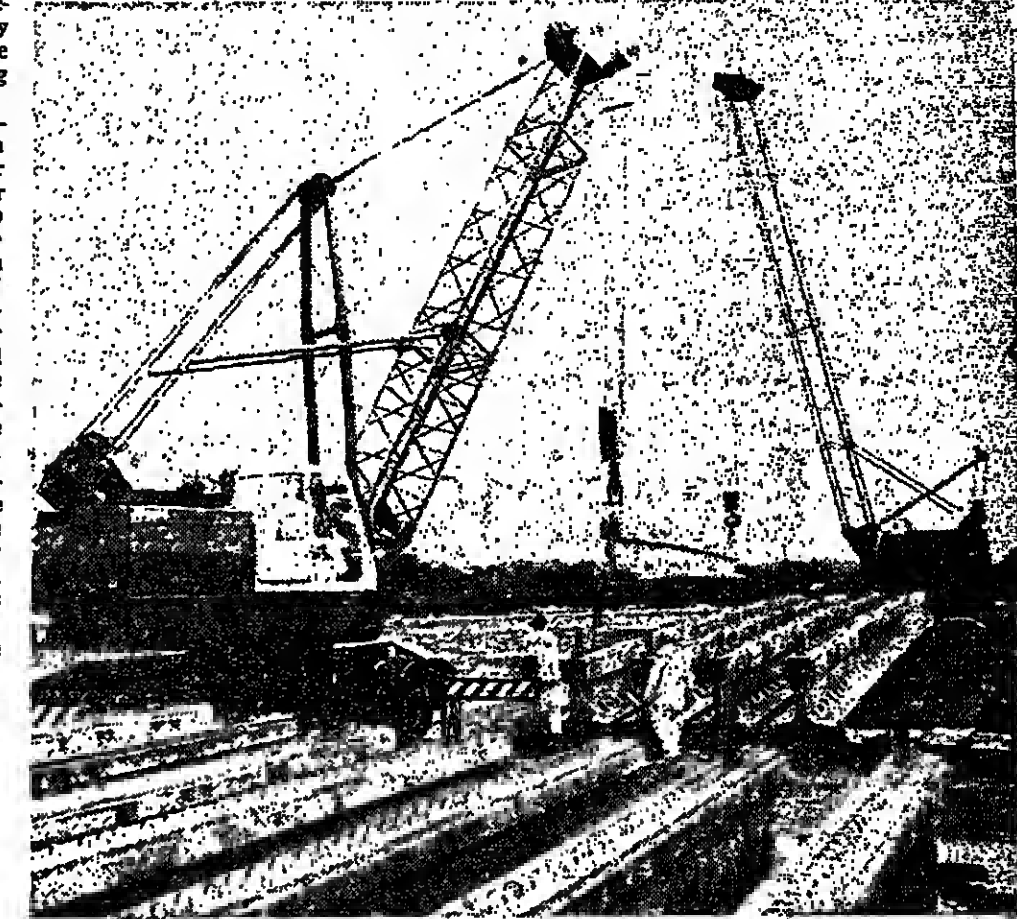
Hymac was the first U.K. maker of hydraulic excavators, the first machines being built in 1962. Its factory is at Rhymney, South Wales, where a major capital investment programme is in progress.

The marketing division, which employs 440, has its headquarters at Newbury. A direct sales and service operation works out of 21 centres throughout the U.K.

excavator loader and a range of hydraulic excavators at Rhymney, plus a materials handling derivative. It claims that in 1976 it accounted for 30 per cent of the total U.K. market for the machines it makes.

Some 56 per cent of new machine sales were exported in that year. There is a distribution subsidiary in Sweden.

Hymac also handles sales in the agricultural and construction markets for the Overlander 45 rough terrain forklift truck made by Coventry Climax. It distributes throughout the U.K. and Ireland a range of hydraulic excavators made by the West German concern Demag.



Jones 971 cranes lifting concrete beams.

BABCOCK AND WILCOX

BABCOCK AND Wilcox bought Winget (which had previously merged with Gloucester) in 1976. It agreed to do so. Muir Hill had already joined the £40m. and profits about £4m. group and in 1969 the last large machines are imported from Sweden).

Babcock entered the construction equipment manufacturing world leader in the manufacture of black-top pavers. Around 90 per cent of its assets are the U.S. group and Richey involved in this business but also has a unit making road sweepers. There is also a division which imports the tributorship which imports the based in Scotland, have since Marion walking draglines and ceased. But it gave Babcock the Richey tower cranes. Winget's main plant is also when the Industrial Reorganisation Corporation suggested it create machinery, from the very

large batching plants for building to the smallest mixer. It also makes, in association with Dynapac of Sweden, vibration-compaction equipment (the larger machines are imported from Sweden).

Muir Hill manufactures shovel loaders and big powered four-wheel-drive tractors aimed principally at the agricultural market.

At Gloucester, another subsidiary Slater and Engle makes dumpers and rough terrain fork-lift trucks for Winget to market.

Eighteen months ago Babcock set up Babcock-Kina, at Ipswich, which makes high-pressure water jet systems.



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FREDERICK PARKER

FREDERICK PARKER is the kind, making complete plants of quarries and sand and gravel pits, mobile and fixed asphalt plants and other equipment including crushing plant, washers and de-sanders, conveyors, vibrating screens and conveyors and so on.

Sales in 1976 were £25.4m. In the previous year and last year exports were £19m. The group has 290 employees at an 18-acre site in Leicester as well as a subsidiary in Toronto, Canada. Until April this year Parker was a private company but it

has now joined the over-the-counter market organised by M. J. H. Nightingale. This followed a placing of 1.23m. Parker shares with institutional investors.

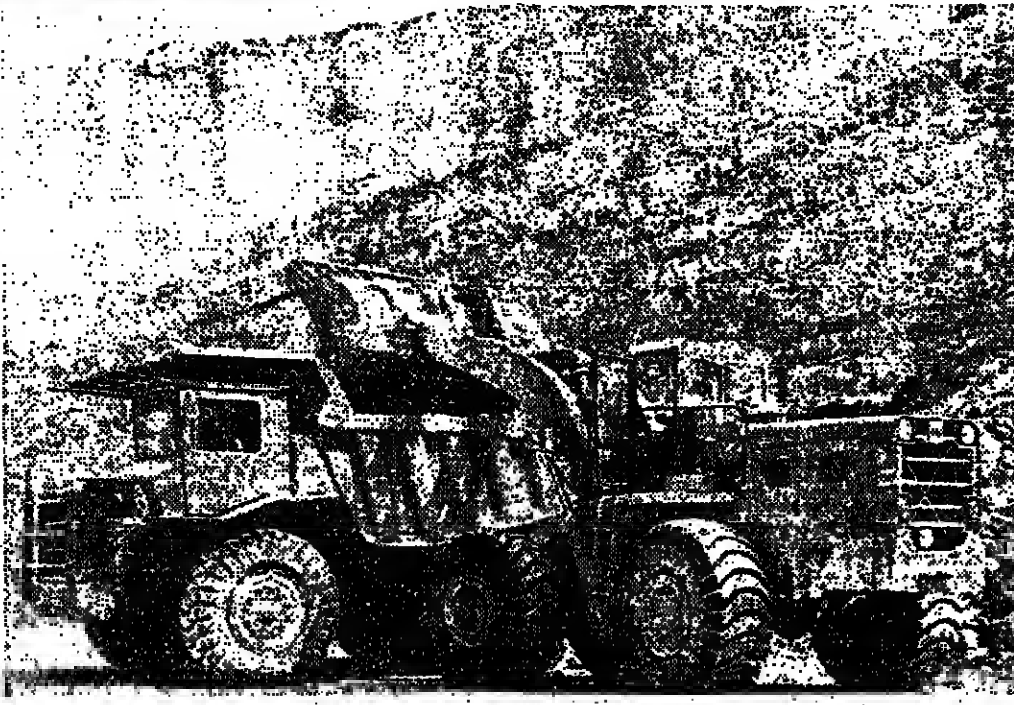
The decision to make a market in the shares was taken for tax reasons. Parker intends to retain its private image (all the Board members are within the Parker family, mainly the third generation following the founder Frederick Parker who set up the business in 1911).

The company needed a market in the shares because of future capital transfer tax liabilities. A Stock Exchange quotation was ruled out because

more shares would have had to pass out of the family's hands—under the over-the-counter arrangement it will retain 90 per cent of the capital. At the placing price Parker would have a market value of around £17.25m.

Throughout the company's history its growth has been remarkable. This has been particularly so since 1973 with the acquisition of a second factory adjoining the Viaduct works two miles from Leicester City centre.

More than 74 per cent of output is exported to over 30 countries and Parker holds the Queen's Award to Industry.



Aveling-Barford team in a Welsh quarry—a 35-tonne Centaur dump truck being loaded by a TS500P wheeled loader.

COLES CRANES

COLES CRANES is the major subsidiary of the Acrow engineering group. Together with Acrow's other offshoot Priestman it accounts for about half of Acrow's £122m. turnover and the region of 50 per cent of the group's £10.73m. pre-tax profit.

Since its acquisition by Acrow in 1972, the four Coles cranes have been modernised, and an entirely new product line has been introduced to reinforce Coles' position as Europe's leading manufacturer of cranes and place it in an ideal position for making a forerunner in the world crane market where it currently ranks fifth place.

A £8m. expansion programme is taking place at Coles factory in Sunderland which accounts for 60 per cent of its output. In 1980 the complete plant will have been modernised. The programme is to step up production from 70 cranes a month to 100 without increasing the size of the workforce from the present 30.

COLES CRANES developed its Hydra Speedcranes, Hydra Trucks and Hydra Huskies which form the main part of to-day's comprehensive range.

In 1967 Priestman Brothers of Hull joined what had then become the British Crane and Excavator Corporation and provided crawler mounted cranes plus wheel and crawler mounted excavators to the range.

In the merger boom of the early 1970s, the Steel Group

looked an attractive takeover proposition and in 1972 Crittal Hope, a Slater Walker subsidiary, attempted to take over the group. The Steel management preferred to join forces with a main-line construction organisation and approached Acrow. A friendly merger was arranged.

Priestman to-day employs 1,000 at Hull making hydraulic excavators, crawler cranes, and pedestal-mounted marine cranes. About 40 per cent of its output is exported.

AVELING-BARFORD

AVELING-BARFORD, together with Aveling Marshall, Goodwin Bardsby and Barfords of Belton, makes up the construction equipment division of Leyland Special Products (LSP), the specialist engineering part of British Leyland. Projected turnover for the division in 1977 is £61m. against £41m. last year. The profit target before interest is £5.8m. (£4.5m. in 1976).

LSP says its construction equipment companies form one of the biggest groups of this type in Europe. Aveling-Barford is Britain's leading manufacturer of earth-moving machines and also the world's largest manufacturer of road rollers. Aveling Marshall is the only British-owned manufacturer of crawler tractors for both industrial and agricultural applications. Goodwin Bardsby is one of Britain's leaders in the quarry, sand and gravel equipment industry as well as manu-

facturing a range of asphalt plant for road-making purposes. Barfords of Belton produces a wide range of dumpers and many other items of building equipment.

Some £11.5m. has been approved this year for investment at the Aveling-Barford and Aveling Marshall plants. Of this the £5.5m. being spent over the next 2 years at the Aveling-Barford plants at Grantham, Lincs., and Newcastle-upon-Tyne will add 30 per cent to production capacity and enable the company to meet anticipated sales in the early 1980s.

Aveling Marshall is the former Marshall Fowler concern, acquired by LSP from Thos. W. Ward in 1975. The £4.5m. to be spent at the Aveling Marshall plant at Gainsborough, Lincs., will provide modern facilities and equipment for a new range of crawler tractors and wheeled loaders.

Output per employee at Rostec is £44,000—four times the industrial average in Britain, over twice the American average and three times the European figure.

The group has started a £6.7m. capital expenditure programme of which £4.5m. will be spent on machine tools, although the present average age of the machine tools at Rostec is under five years.

The company is also committed to spending a further

J. C. BAMFORD

J. C. BAMFORD Excavators, is in turnover terms the largest of the U.K.-owned construction equipment groups. This year expected sales should reach £95m. against £86m. in 1976. The company has 60 per cent of the U.K. market for excavator loaders and is market leader in 32 countries. There are 1,500 employees at the one plant at Rostec, Staffs.

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RANSOMES AND RAPIER

JCB was founded in 1945 by Joe Bamford who retired at the end of 1973 and now lives in Montreux, Switzerland. His elder son, Anthony Bamford, 31, is now chairman and managing director.

The JCB group is still privately owned and comprises JCB Research, JCB Service (not a limited company and therefore is not required to file profit figures) JCB Sales and JCB Earthmovers (the group's planning and development company). Overseas subsidiaries are operated in France, Canada, the U.S., the Netherlands and West Germany.

More than 60 per cent of production is exported to 80 countries and in 1974 the company was awarded a Queen's Award to Industry for increasing sales of excavator loaders from £11m. in 1971 to £25.6m. in 1973.

Output per employee at Rostec is £44,000—four times the industrial average in Britain, over twice the American

RANSOMES AND RAPIER is a parent Newton Chambers, by subsidiary of the Central and Sheerwood Trust holding company. It makes crawler cranes and hydraulic cranes and truck concrete mixers and recently re-entered the market for the giant walking draglines used in open cast coal mining—it is one of only four manufacturers in the world capable of producing these big machines. The first 50 per cent scheduled for delivery in the U.S. in 1978 and, according to the Central and Sheerwood annual report, "are expected to make an increasingly dramatic impact on R and R's future turnover and profits."

The company has been revitalised since it was taken over in 1972, along with its then

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Leasing facilities

ADVERSE conditions in the British construction industry has suffered in recent years, particularly the high rate of inflation and the lack of liquidity caused by a severely depressed market, has made leasing of equipment an attractive option for many contractors.

Although the demand for leasing facilities has not been particularly strong, largely because most companies have been putting off where possible the acquisition of new equipment, it is clear that leasing, whether to hire or outright, will remain a convenient option for those who need it.

In spite of the poor economic conditions, the leasing industry as a whole remains strong and able to meet the needs of manufacturers and users, with leasing companies heading for another record year in 1977. It is estimated that the cost of new equipment purchased this year will be between £500m. and £600m., as against a total of £421m. in 1976, a 25 per cent increase on

the previous year, but it is perhaps worth looking at the size of the construction equipment share in comparison with that of some other industries—although some figures remain imprecise. A total of £139m. was spent on plant and machinery in general, of which perhaps £35m.-£40m. was construction equipment. This compares with £59m. on commercial vehicles, £78m. on computers and office equipment, and £91m. on ships and aircraft.

Initiated

Most leasing of this kind is initiated by the stabilised leasing companies and the subsidiaries of the four clearing banks—Mercantile Credit (owned by Barclays), Lombard (owned by National Westminster), Lloyds Leasing and Midland Montagu Leasing. However, in an increasing number of cases the finance companies are now leasing equipment to companies which in turn hire them out to contractors.

As in other types of leasing, the advantages to the end-user

are manifold, but derive mainly from the fact that a tax allowance of 100 per cent in the first year is made and there is no major capital outlay which will put pressure on company reserves and be vulnerable to the eroding effect of inflation.

In the construction industry, however, the ability of contractors using leased equipment to project their costs accurately (on the basis of leasing charges) is regarded as extremely helpful when preparing to bid for contracts. It is regarded by most as a far less worrying means of financing than relying on an overdraft which can get out of control.

Even more useful in these circumstances is the facility offered by some leasing concerns—the inclusion of maintenance in the overall charges thereby reducing the margin of error even further. In conditions where other costs such as wages, a high input in the industry, tend to be quite variable and inflation still running at around 10 per cent, this can be a stabilising factor.

The principle of leasing lies in the fact that lessors qualify in the same way as outright buyers of new capital equipment for full first year depreciation allowances. While the assessment of commercial risk in business is basically the same as that applied to medium-term loans, leasing is a 100 per cent financing facility, and therefore of assistance to the lessee's cash flow.

The main advantage is that this tax allowance can be passed on to the lessee in the form of reduced rentals, and while the asset never becomes the property of the lessee (to preserve the legality of allowances), some arrangement of this kind can be reached.

For example, a second lease at peppercorn rent can be granted at the expiry of the first, or a rebate in rentals to reflect a lower value of the equipment can be agreed upon. In the case of the construction industry it is clear that depreciation can be set at a faster rate than other industries.

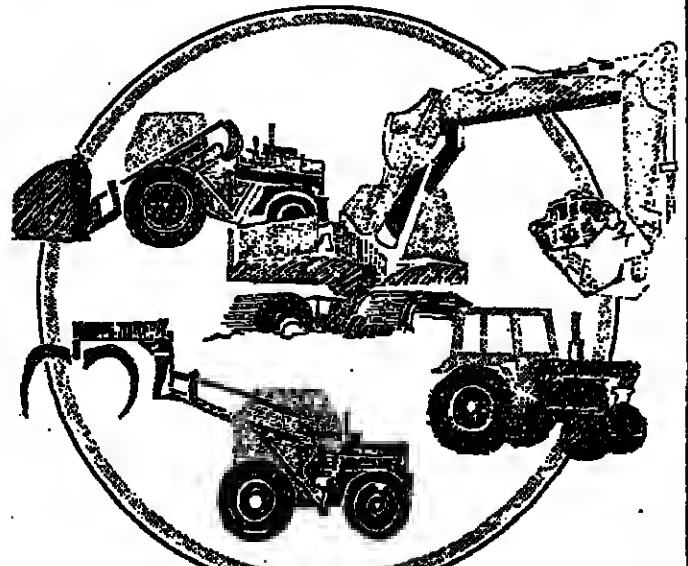
The direction the industry is going is well illustrated by the fact that in the U.K. leasing accounts for around 7 per cent of total capital investment by industry, while the figure in the U.S. has now risen to 18 per cent. It is estimated that in America leasing arrangements already cover more than £30bn. of capital equipment, a staggering figure.

As Mr. Victor Ader, chairman

of Mercantile Credit, said earlier this year: "Leasing is really another form of medium-term loan. It is but an alternative financial package to the more traditional forms of medium-term lending provided by the clearing banks. Its basic advantages are cash conservation, credit preservation, structural flexibility and resources expansion."

But one of the more interesting developments for the construction industry, with a high proportion of work carried out abroad, is the prospect of international leasing becoming more readily available, despite the slow progress so far.

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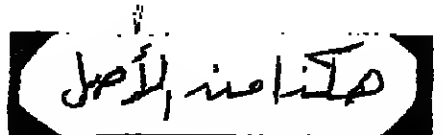
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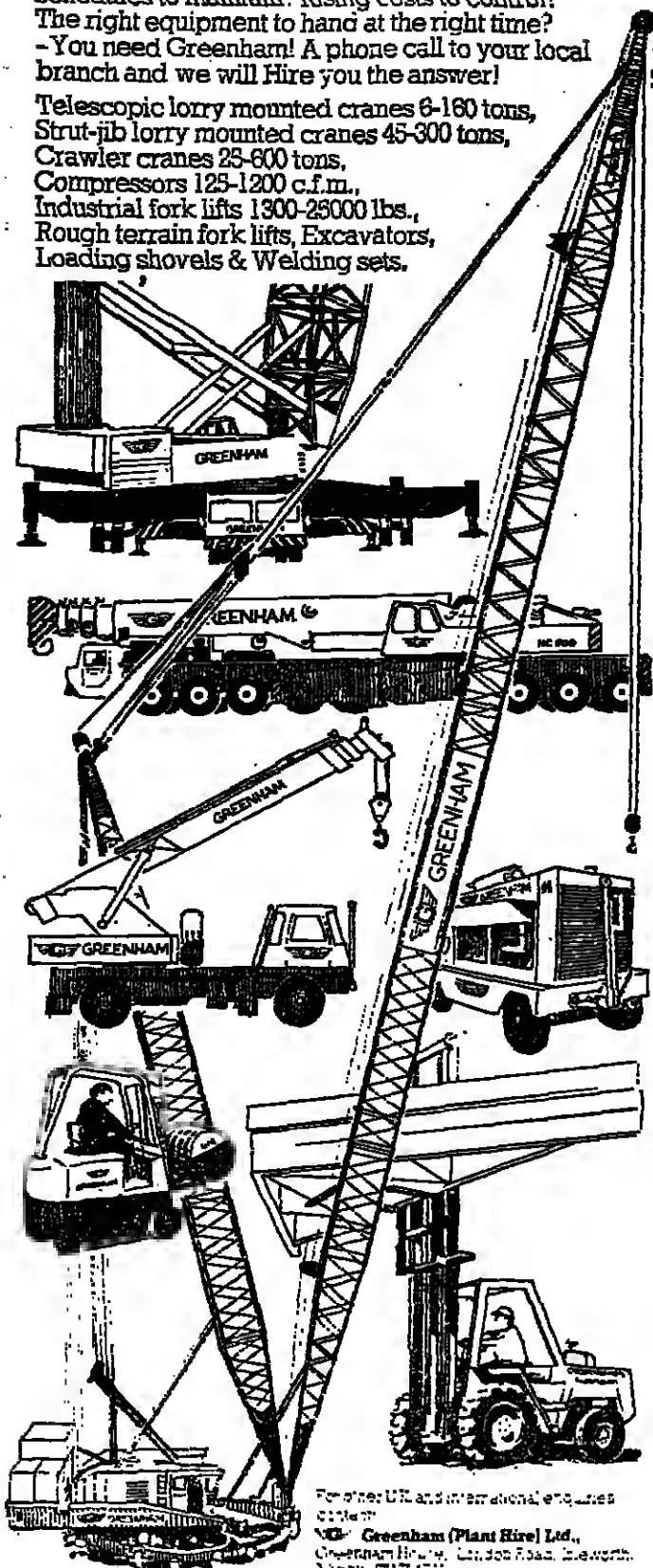
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THE CHANCELLOR'S measures to aid the construction industry, unveiled as part of his latest economic package, will have been as warmly welcomed by plant hirers as by other sectors of building and civil engineering, despite the usual strictures by some that Mr. Healey may have done too little too late. For plant hire, a relatively new industry but until recently one of the fastest growing in the country, is now deeply affected by the same recession that has so seriously hit its main customers, the builders and civil engineers.

The very factors that have accounted for its growth rate successfully insulated it for a while. In times of depression builders tend to turn still more to hiring plant as an alternative to buying their own, thus reducing the amount of hard-to-find cash tied up in assets they may not be able fully to utilise. Hiring lets the builder get on with the job he knows best, building, rather than having to choose and service plant and, in the case of things like cranes and other operated plant as opposed to items like compressors which are basically non-operated, find and train the men to run it too. The hirer's returns are also better for he can move his equipment from site to site as it is required rather than having to let it stand expensively idle for what might be long periods after specific jobs are completed.

Hiring also frees the builder from the burden of being responsible for meeting safety requirements in respect of plant and of bearing maintenance costs, which can be very heavy indeed. But inevitably the downturn has worked its way through. The industry has seen no major bankruptcies like those experienced among its customers, but there have been some substantial falls in profits—with spectacular exceptions as well—while turnover often remaining static (at a time of heavy inflation) or declining.

This in turn has led to intensified competition as companies have reduced their hire rates in a bid to secure better utilisation of plant. At the same time the problems of the

construction industry have caused an increase in the volume of bad debts faced by hirers. Many of those hirers are themselves small companies not necessarily easily able to cope with these sorts of pressures. In all, there are some 1,400 hire companies active throughout Britain. Together they are estimated to have £280m. invested in plant, with £280m. of that accounted for by the top 50 and the remaining 40 per cent. shared by the remainder.

None of that top 50, however, is especially large compared with the major civil engineering contractors. Thus George Wimpey alone has a plant fleet larger than that of the three major hirers combined, and a recent study by stockbrokers Greene and Co. estimates the gross cost of the plant fleet of the top ten construction companies at £281.65m., with another £48.41m. accounted for by hirers owned by construction companies, and the top ten independent hirers responsible for £153.73m.

Not only is the industry relatively small in terms of the construction industry's overall investment in plant; it also tends to be somewhat localised. Indeed only one non-contractor-owned hirer can be said to be truly national in its operations. This is Hewden-Stuart Plant, the biggest of the hirers, with pre-tax profits of £2.24m. on a turnover of £29.6m. in the six months to the end of July against £1.65m. and £26.5m. respectively a year before. Hewden-Stuart, with its origins firmly rooted in Scotland, perhaps typifies the way so many individual companies have grown basically through a series of strategic acquisitions—its purchase of A. Gunn last year was the one which gave it a full national operation—and the whole sector has been notable in recent years for the amount of takeover activity within it.

Thus the past 12 months have seen Transport Development Group take over H. Cox; Carlton Industries (a subsidiary of

London Merchant Securities) gain full control of Bristol Plant; Y. J. Lovell acquire both Francis Plant and, from Ready-Mixed Concrete, RMC Plant; M and J Engineers acquire Pace Plant; and Hewden-Stuart's Southdown Plant subsidiary buy London Compressor Plant from one of its chief rivals, Richards and Wallington.

The involvement of diversified groups in plant hire—and a very substantial involvement it is too in the case of companies like British Electric Traction and Lea—shows the importance attached to the industry by concerns whose main interests lie well away from construction and civil engineering.

It is evident too in plant hire's innovative influences on the construction industry. It is the presence of companies like, for example, crane hire specialists Richards and Wallington, G. W. Sparrow and the BET subsidiaries J. D. White and Greenham Plant that has brought new

varieties of crane into operation in the U.K.—cranes which would have been hopelessly uneconomic purchases for individual contractors, with their limited scope for full utilisation, but which make a great deal of sense in the hirer's hands. Indeed, much of what has been achieved in North Sea development has been made possible only by the hirer's ability to innovate new plant.

North Sea development itself has been important in the success enjoyed by several of the major hirers, providing a considerable proportion of the turnover enjoyed, for example, by the two biggest crane hirers, Sparrow, and Richards and Wallington. Here, however, the peak of activity is probably over, giving those hirers with heavy involvement the seeds of another future problem. Meanwhile, the industry has its more immediate problems.

With hire rates depressed (though there seldom seems to have been a time when the industry did not feel that to be the case) vital investment in new plant has to go by default, despite the advantages given by recent falls in interest rates. The situation was well summed up by Mr. Frank Jamieson, Hewden-Stuart's chairman, in his 1977 annual report published in May.

He said: "Recently one of our competitors reported that hire rates for smaller machines were, despite inflation, below the level of two years ago and that he was receiving from the same site a higher hourly rate for a skilled joiner than he was for a £12,000 machine complete with experienced operator. Under these conditions many plant hirers across the country have sold their equipment, often for export, and withdrawn from the market. This pattern will continue until such times as the volume of plant available matches the reduced level of work."

The latest initiative of the Contractors Plant Association may bring some sense to the end of last week's launching of a series of cost studies which will enable hirers, for the first time to have an accurate picture of the real cost of owning, operating, and placing various types of plant.

The sad fact is that the smaller companies in rate cutting, perhaps those that flourish out of the industry downturn—and their fortunes at any given time the financial expertise of whether they are profitable until it is too late—then not only being selves heavily into the also threaten to drag competitors, who have forced to reduce charges.

The association's hope, its cost studies—which include any elements related to profits—will provide a yardstick against which to compare their own methods and cost trends studies will be updated recent a date as practice.

Meanwhile, the fear is that when—and if—the cash to purchase new plant is gone, the industry will be in a state of financial collapse. One brave attempt to way out came a year ago when Sparrow's £5m. (£2.5m. chase of the crawler crane and heavy lifting equipment McDonough Corporation U.S., which was active in America but in Canada, the Far and East.

Sparrow's U.S. move was the first overseas foray of a U.K. plant hirer, but it rank as one of the ambitious. The key to overseas appears to be specialising with the concept of a peculiarly British general appear unlikely to be a secure much benefit by up abroad.

So that leaves the large of the industry firmly in this country, seeing in severe difficulties after a period of growth but a same time by no means a run out of steam yet. Rationalisation will continue, it would be surprising if not in 1979 did not see immediate advantages for the construction industry bring a substantial revival in the industry's fortunes. Those large companies whose performance weakened in the past year should move back onto a staid growth trend while smaller localised competitors in terms of, rather than equipment, will probably do well. The core of their customers, however, likely to be a big rise in charge levels.

Michael Cassell

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Buyers short of cash

U.K. CUSTOMERS for construction plant and equipment are having a tough time at home, with the recession in building and civil engineering dragging on into its fifth year and with little real sign of any significant improvement on the horizon.

In the past two years no fewer than 5,000 building companies have gone out of business, many others have undergone severe rationalisation and nearly all have suffered in some way from a domestic downturn in demand which has cut ordering levels by 25 per cent. since the last peak in 1973.

At the very best of times the average construction company is hard pressed to meet anything other than a minimal capital investment programme and it is hardly surprising that for many the question of plant renewal has been at least temporarily shelved. The situation has naturally been less serious for the larger builders and civil engineers, many of whom have maintained work levels by increasing overseas activities, but even here there have been signs of plant investment cycles being stretched out over longer than normal periods.

If the construction sector was anticipating a major boost from last week's mid-budget, it must have been sorely disappointed and there is a widespread hope that next time round the Government will provide the industry with a stimulus sufficiently large enough to reverse the sector's declining workload.

Mr. Healey did announce that some £400m. would be injected back into the industry in the next financial year, but in view of earlier proposals to reduce public expenditure on construction during the same period, the effect of the latest decision will broadly be to restore the status quo.

The industry is anxiously re-emphasising the point that in 1976 Mr. Healey chose to reduce the public sector construction budget by no less than £1.4bn. and that despite some minor packages of aid announced during 1977 he still has a long way to go to make amends for his actions.

In addition, the help he did announce seems unlikely to help the "heavy" end of the industry where expenditure on plant and equipment is higher. Although no details have yet been made available it seems likely that most of the money will go into housing improvement and renovation work, an area where increased output can make a fairly major impact on unemployment. The civil engineers were

quick to complain that their sector of the industry is still in serious difficulties in home market terms and that they alone would need £300m. in new business merely to restore their output levels to those which pertained during 1974.

All sectors of the industry are annoyed that the new money to be allotted for construction projects will not even be made available until the start of the next financial year, still five months away.

One significant voice in support of the Chancellor's strategy, however, came from the National Federation of Builders' and Plumbers Merchants, which warned that the building industry's capabilities had been severely damaged by excessive upswings and downturns in workload and that this time a policy of moderate and progressive rises in public spending should be followed.

The Federation said it believed that a gradual increase in budgetary levels, with occasional moderate checks, if required, would better ensure steady capital investment in modern plant and equipment and the retention of a more stable and skilled workforce.

The Federation's views were not, however, universally shared and the National Federation of Building Trades Employers described the £400m. as "the least the industry had hoped for."

There are an estimated 250,000 construction industry workers out of jobs—the figure is higher if employees in associated industries and professions are taken into account—and there is a great deal of scepticism concerning the Chancellor's projection that his plans would provide an additional 30,000 jobs.

It is being pointed out that because many contractors have been keeping on people—for whom there is little work—in the hope that an upturn is on the way, there is considerable underutilisation and that not until this slack is taken up will new jobs begin to be created.

Over and above the latest budget proposals, therefore, the outlook for the industry remains fairly bleak. The value of total new output for the current year is expected to fall by around 5 per cent.—an improvement on earlier forecasts of 8 per cent. or more—but the decline seems certain to continue next year even without any Government-formulated restrictions.

The last Little Nerdly report on the construction sector suggested that new output next year would show a decline of a further 4 per cent. in 1978, a picture painted in the same report of output patterns since

the last boom makes sombre reading, with the industry's workload falling by 8 per cent. in 1974, by 6 per cent. in 1975, and by 4 per cent. last year.

The salvation for many contractors—as well as their plant and equipment suppliers—has been the availability of work overseas. The plant and equipment manufacturers' fortunes must largely have been sustained because of their customers' commitments to large capital-intensive projects abroad and their readiness to ship plant from the U.K. for use on site, often because the developing countries are not in a position to supply the hardware themselves.

It is certain that without the overseas projects suppliers of equipment for use in sectors like road building and earthmoving would have fallen on much harder times in terms of sales to their domestic customers.

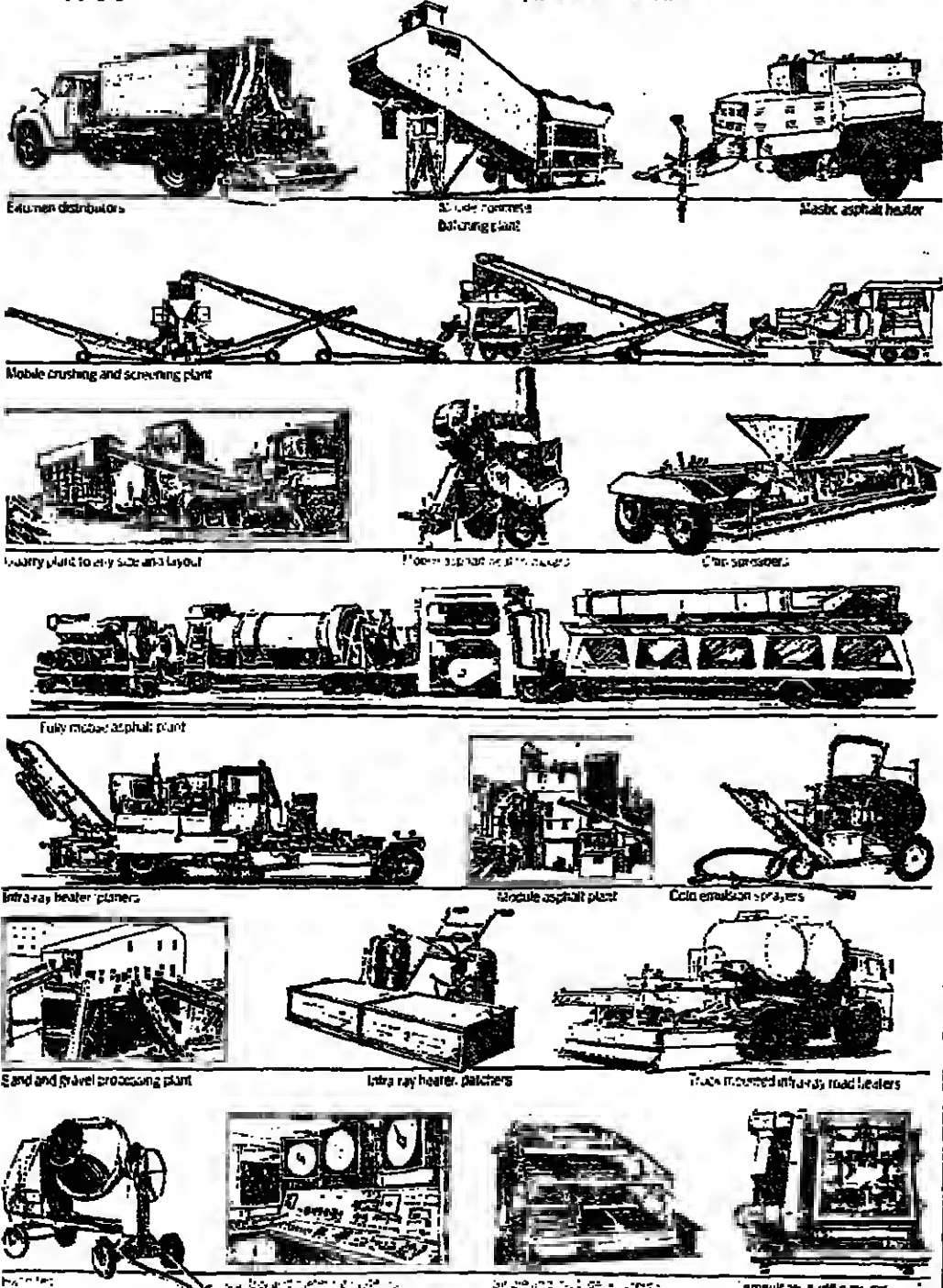
The tendency to raise overseas work as a percentage of total work is likely to be maintained by the U.K. construction sector in the longer term. All the projections suggest that to sustain the same levels of U.K. cannot in the future hope to sustain the same levels of major civil engineering activity which have survived since the last war.

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A major break in industry's lifeline

BY NICK GARNETT and LYNTON McLAIN

BRITISH Oxygen Company (BOC) dispute blew up a week ago amid intense public interest. Since the first major strike a wage offer ostensibly at the limits set by the Government's 10 per cent. limit has crippled large sections of industry, opened up the prospect of total shutdowns in building and led to tens of thousands of lay-offs throughout the country.

The roots of the strike of manual workers in BOC's Division lie in their unwillingness to accept single wage rises, suspicion of company work which have varying on different categories workers, and resentment, justifiable or not, at the way the company has conducted negotiations. The result has been little short of chaos for BOC's customers. Managers and workers throughout the country will be busy watching developments at a national shop stewards' committee meeting held for to-day to discuss company proposals to end the strike.

Companies in Britain's engineering, metal fabrication, building, shiprepairing, electrical, electronic, chemical, glass, textiles, construction, food and light bulb industries rely to a greater extent on industrial gases.

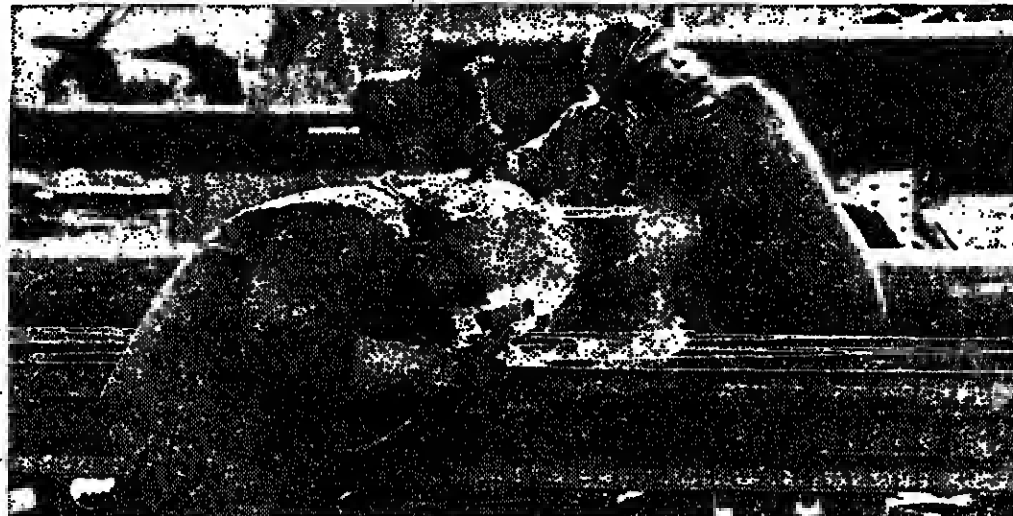
The cost to industry is £100 a day, according to industrial gas users in the north—supplies in three cylinders, in bulk as well as gas for vaporisation on premises, or by pipeline for the fence, from large plants, usually built to specific large plants—

Industry benefited from the introduction of competition into the home market. There was more innovation, particularly in Air Products in the field of oxygen enrichment of iron foundry cupolas and in other novel applications for gases.

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force, the offer seemed to open up the prospect of job cuts, a reduction in working hours which would hit overtime and the threat of a form of wage "clawback" in 1978.

Talks held under the auspices of the Advisory, Conciliation and Arbitration Service last week—with the company and union officials talking to ACAS separately—produced assurances from BOC on hours and manning which went a long way to allaying some of the fears of the unofficial strikers. Officials of both unions were quietly optimistic that the men might be enticed to go back to work and allow negotiations to resume.



Oxy-acetylene welding accounts for the largest part of cylinder gas sales in Britain.

190 per cent. of pipeline gases are bought by the steel industry and most of the rest by the chemical industry.

Oxram-GEC, one of the first major companies to shut completely as a result of the strike—has sent home 3,000 men—was using 200 tankcar loads of liquid gas a week before the strike. Demand for light bulbs fluctuates and it has not been able to justify piped industrial gas supplies: in any case, it is doubtful that BOC would even consider the idea on the grounds that there was insufficient demand elsewhere in the Wembley area where the company has its factory.

In the context of the present strike, the method of delivery is important as it is only hourly-paid cylinder handlers and drivers who are in dispute. This cripples all but the biggest users. It is significant that the British Steel Corporation has not announced any lay-offs, with gas supplies continuing down pipelines from BOC's tonnage works. Only at British Steel's Corby works, where some BOC employees on the tonnage oxygen plant are hourly paid manual workers, has there been any major upset of steel production.

With the basic oxygen steelmaking plant shut down, the works has lost 90 per cent. of its steelmaking capacity.

Liquid nitrogen

Aside from the steel industry which, while it uses by far the bulk of oxygen, now has a slow growth in demand for the gas, other industries are recording record increases in industrial gas consumption. The biggest growth is for liquid nitrogen, which is delivered by road or rail tanker. BOC is experiencing a 20 per cent. annual growth in liquid nitrogen sales to the food, metal heat treatment,

But as 30,000 companies new to the strike have fanned to their cost, the existence of Air Products on the British industrial gas market has not helped in times of crisis at BOC. Air Products' drivers are only willing to help BOC customers stranded without gas where health or safety is at risk.

Since there is no major alternative to Air Products as a source of bulk and cylinder industrial gas supplies and since even these gases are not new available to the majority of users, the strike is proving to be extraordinarily damaging to industry.

Some shipyards and factories

still proceeding when the men have tried to obtain supplies from overseas. Often these have been blocked by workers sympathetic to the strikers, even though this may mean the loss of work. Now it looks as if workers in some of Air Products' customers are beginning to proceed when the men walked out.

One initial problem for officials of the Transport and General Workers' Union and the General and Municipal Workers' Union was that their figures did not agree with those of the

company. For one thing, they cast doubts on whether a new productivity set up could mean in cash terms what the company said it did.

For the drivers, cylinder fillers and handlers, there were two further and more immediate worries ever manning levels and hours of working. There appeared to be a clear indication from the company that the productivity offer would have to be linked to at least a review of manning and of hours. There was also a hint that if productivity did not come up to expectations that would affect the way the company negotiated its pay next year.

The claim was only a bargaining position but in this case it reflected an obstinate reluctance to accept rises anywhere near single figures. The problem was exacerbated, at least from the company's point of view, because a large part of the productivity deals which could benefit individual pay rises above the 10 per cent. threshold.

Part of the difficulty stems from the company's current 1980 agreement which provided for productivity bonus payments. A series of bonus payments were made during the following years on the basis of a sizeable reduction in manpower. Shop stewards say that further bonus payments based on that agreement were blocked

Sanctions

The result is that workers at many depots are holding out for big across-the-board rises which, as the company is well aware, would make BOC vulnerable to Government sanctions.

Shop stewards, and some union officials believe the company has negotiated rather clumsily and has not shown itself to be as sympathetic to the pay claim as it could have been, given its profitability. The company says it has negotiated carefully and responsibly and has shown its willingness to go a long way towards the workers' claim by devising a well-thought-out and generous productivity deal.

It seems almost certain that an agreement on a productivity scheme is the only way out of the dispute. Industry will breathe a big sigh of relief when that happens.

Reason for joining

Mr. H. Smith
In your issue of October 29, your article on the reasons for joining the TUC is most interesting. I am sure your readers are aware that there are many reasons why men do not always join unions. Not an insignificant number of them can be dated with Government. If the Prime Minister really saw the light and is ready to apply his new philosophy across the board, I think the nation as a whole would have cause for rejoicing.

Letters to the Editor

These are the kinds of questions to which answers ought to be provided for all universities before the betterment of the sector is undertaken. Presenting just one variable from a multivariate complex is facile and not productive. What is "productive" activity, anyway?
Barbara Harris,
Coleridge, Norwich.

Monetary union

From the Director, The European Movement
Sir—Mr. Oliver Smedley (October 27) expresses his horror at the news that Mr. Roy Jenkins proposes the creation of a European monetary union. His objections seem to be confined to the implied transfer of political control over money supply to the European Commission and not to a democratically elected European Parliament with legislative powers.

Electors to the European Parliament are, however, to take place in 1978. Most of the European political party groups intending to contest the elections have already declared their intention to press for economic and monetary union with the elected Parliament exercising control over the European Commission and sharing legislative responsibilities with the Council of Ministers.

It would, however, require more than the political will of the European Parliament to achieve monetary union. Member Governments would also have to agree to co-ordinate their economic policies and pool parts of their monetary reserves as a first step to such a union. The rewards for their co-operation would be immense. We have suffered years of monetary crises and wildly fluctuating currencies which have seriously affected trade and investment.

The stability which would follow the creation of a common European currency would re-establish business confidence in the future of the European Community and its return to steady economic growth and prosperity. Ernest Watling,
The European Movement (British Council),
Europe House,
1A, Whitehall Place, S.W.1.

Management of direct labour

From the Head of Research, Aims for Freedom and Enterprise.
Sir—Your report (October 26) Mr. Guy Barnett, for the Department of the Environment, as saying that the Government considers local authority building departments (in the regions) have an important role to play in bringing new life to decaying urban areas. One might just be tempted to heading this, even in a raising productivity and make the best use of resources. If there was anything to substantiate that DLO's certificate is the best among them—produce work cheaper, faster and to higher standards than private contractors' (Labour's background paper, Building Britain's Future, p. 38).

Mr. Freeson, the Housing and Construction Minister, and the public treasurers' organisation, the Chartered Institute of Public Finance and Accountancy, have now openly admitted that there is no way of judging the performance of a DLO. The reason is that they do not have a management and accounting system producing the necessary information.

Rose coloured spectacles

From Mrs. L. Turner.
Sir—With reference to Dr. D. Carrick's article "Women: a highly personal view" (October 24), I would like to take up his reference to "the more stable male."

I have noticed that male chauvinists talk of all women in the most general terms (referring to menstruation as though it was unnatural, despite the fact that it affects half the population) but will not give the same treatment to their male counterparts. In fact when they talk of "men" they usually have themselves and their friends in mind, expounding their virtues and looking at themselves through rose coloured glasses. I think if they were to talk to battered wives, rape victims, deserted unmarried mothers and, any wife who does not argue "in order to keep the peace" they

The will to work

From Mr. F. Steiner.
Sir—Unemployment is a grave problem and by common consent, unemployment of school-leavers is among its most harmful forms.

I was told only the other day that a well-known laundry group is finding it difficult to replace a branch manager who recently retired. The shop is being temporarily run by one of the supervisors who explained to me that the reliable women, available for work and looking for it, were in the generation around retirement age. The younger women, and particularly those with children, cannot easily fit in with the limits, and inevitably want to come to work on their own terms. And the really young ones don't want the work.

The first two sentences ring true in any case. If the third sentence is right, new true are unemployment statistics in general, and those for school-leavers in particular.

Action and reaction

From Mr. E. Broad.
Sir—Mr. Healey and the unions seem quite pleased to say that reducing taxation on businesses, etc., will help to reduce unemployment.

If this is correct would not Mr. Healey's original imposition of these heavy taxes have created the unemployment the unions and the whole nation is complaining about?

In any event no thinking experienced employer would increase his staff until at least the Employment Act, which is grossly unfair to business men, is amended. This will sheer abuse and backing by shop stewards, has itself created much unemployment and deterred entrepreneurs from expanding their labour forces.

Paltry award to pensioners

From Mrs. S. Tresadern.
Sir—While obviously welcome, the £10 Christmas bonus for pensioners announced by Mr. Healey smacks of meanness.

£10 bonus was first paid in December, 1972, and by the time the 1977 payment is made we will have suffered inflation of some 314 per cent. This means that the 1977 payment at 1972 prices is worth £4.85.

To revalue the bonus to today's price level would require a payment of £21.40, which would cost the Exchequer £214m. Financing this could have been achieved by raising personal tax allowance for 1977-78 by about £15 or so less than has actually been announced—a cost to basic-rate taxpayers of about 10p per week each.

Perhaps the army of Civil Servants responsible for the paltry award to pensioners should compare its declining real value with the fat inflation-proof pensions to which they can look forward.

To-day's Events

Result expected of shop-floor ballot at British Leyland on company's proposed industrial relations terms.

TUC industrial policy conference discusses lack of progress in planning agreements with leading companies and infrequent use of industry Act 1973 provisions on disclosure of company information.

Senior shop stewards from British Oxygen plants meet in London to consider ending unofficial dispute in light of expected new pay offer by company.

Shop stewards at Leyland's Longbridge plant put proposed peace formula to vehicle inspectors on strike over regrading claim.

Mr. Peter Shore, Environment Secretary, meets TUC local government committee to discuss progress in rate support grant negotiations.

Mr. David Steel, Liberal leader, addresses party meeting, Giffnock, Glasgow.

Mr. Ennith Powell, MP, speaks at Economic Forecasting and Business Derivations seminar, Royal Garden Hotel, W.S.

Financial Times/International Chamber of Commerce two-day conference on European Business in World Development opens, Cafe Royal, W.J. Speakers include Mr. Edmund Dell, Trade Secretary, Sir Keith Joseph, Shadow Cabinet member for policy and research, Mrs. Judith Hart, Minister for Overseas Development, and Mr. John Mithras, CBI director-general. Guest dinner speakers are Dr. David Owen, Foreign Secretary, and M. Claude Cheyssen, Commissioner for Development, European Communities Commission.

See Week's Financial Diary on page 8.

We're 50 years young today and our customers can take all the credit

Bournemouth 1927. Bath chairs at 1/6d. per hour. National unemployment had topped two million and it was only a year after the General Strike. Hardly a time or birth-place for a new enterprise, but James Bowmaker and George Kendrick thought otherwise. On 31st October 1927 they started Bowmaker with a capital of £10,000. In 50 years of continuous growth Bowmaker has been developing and improving credit facilities so that today there is a truly comprehensive range of instalment finance schemes available.

Bowmaker financial services

Bowmaker - a member of the Bowring Group

With a network of branches throughout the British Isles to ensure there is local representation in almost every part of the country, Bowmaker can provide both the dealer and the customer with a fast and professional service.

Fast, because that is what the customer wants — professional, because the ever-increasing complexities of today's business and financial life make it more than ever necessary to deal with a well-established and experienced finance house.

Services to industry include leasing, industrial hire purchase and lease purchase. There are also plans for fleet operators and a Farmplan for the farming industry.

Industrial Architecture Award

The award goes this year to the Herman Miller Furniture Factory, Bath, Avon

THE PANEL

This is the seventh year of the *Financial Times* Award for an outstanding work of industrial architecture. During those years some 800 entries have been received in this relatively limited area of new building.

The award is open to all, both architects and engineers, concerned with the design of industrial works which can bring to either town or country an outstanding contribution towards the encouragement of a better industrial environment.

The assessment panel comprises two architects, selected for their eminence in practice and their interest in the industrial landscape, appointed with the co-operation of the Royal Institute of British Architects, together with one lay assessor.

This year the architect assessors were Sir Philip Powell and Mr. William Whitfield CBE. The lay assessor was Sir Charles Troughton, Chairman of the British Council.

Information concerning the 1978 award will be announced in the Spring.

Report of the Assessors

It is the unanimous decision of the assessors that the Herman Miller factory in Bath should be the winner of this year's award. It is, say the assessors, a fine example of the relationship of brilliant architectural skill, industrial engineering ability and management imagination. It is well sited, beautifully and precisely detailed and with well thought out and sensitive treatment of the surrounding areas, particularly the landscaped space between the building and the river. Internal planning is directed towards possible future needs and is entirely flexible, even the lavatories are planned as self-contained cabins which can be plugged in to any one of sixteen positions. This is a building which makes good use of this pleasant, yet industrial, reach of the river.

The Truman Brewery exhibits a very successful merging of new, old and reconstructed work which will add to the London scene for generations. The main, cascading mirrored glass facade forms one side of a new and handsomely paved square off Brick Lane and refits, in slightly distorted form the very pleasant surrounding buildings. The interior is beautifully detailed and very attractive; altogether a fine building both inside and out, of great, indeed romantic, charm in a happy relationship with the old buildings with which it is physically and visually closely linked.

The Sewage Treatment Works at Milton Keynes comprises a large group of separate buildings, the tall Inclinator House being the largest, providing a general impression of handsome, well detailed and sometimes dramatic, industrial buildings sitting, however, on a windswept treeless site. Although fairly new it is disappointing to have to say that the buildings are already beginning to look uncared for.

The Emgas Service Centre at Leicester although working well, and apparently much liked by the users, suffered from disappointing external works (except the internal garden) but the main building containing offices and canteen comprises an elegant and well detailed steel and glass structure.

Excel House Distribution Centre at Reading is a new warehouse and an ingenious and largely successful refacing of an existing warehouse building on the river front, with pleasantly designed external works including the perforated concrete block car-parking areas.

Outside both warehouses are quite handsome, windowless, buildings with plastic coated vertically corrugated steel sheeting in dark green. This is a speculative job, not yet let and therefore looking rather desolate inside. The buildings make good use of the river front, but are generally less successful than the stylistically similar workshop in Bath, by the same firm of architects.

The New Main Boiler House, Oldham and District General Hospital, is a simple rectangular box with a modest, straightforward grey painted steel chimney, standing on a grim site, due to be redeveloped and where demolition has already started. One long side (east facing) of glass in metal frames (generally painted black but the horizontal band of opening lights painted red - a successful touch) is a shop window to the boilers - quite elegant and well designed but marred by a blank panel of brickwork which looks as if a shutter has been blocked up; the other three sides are of brick, harmless but undistinguished - the brick a rather insipid pink.

The interior presents a neat looking job with good finishes; quarry tiled floor, metal decking ceiling, exposed steel frame and cream brick infilling panels for solid walls.

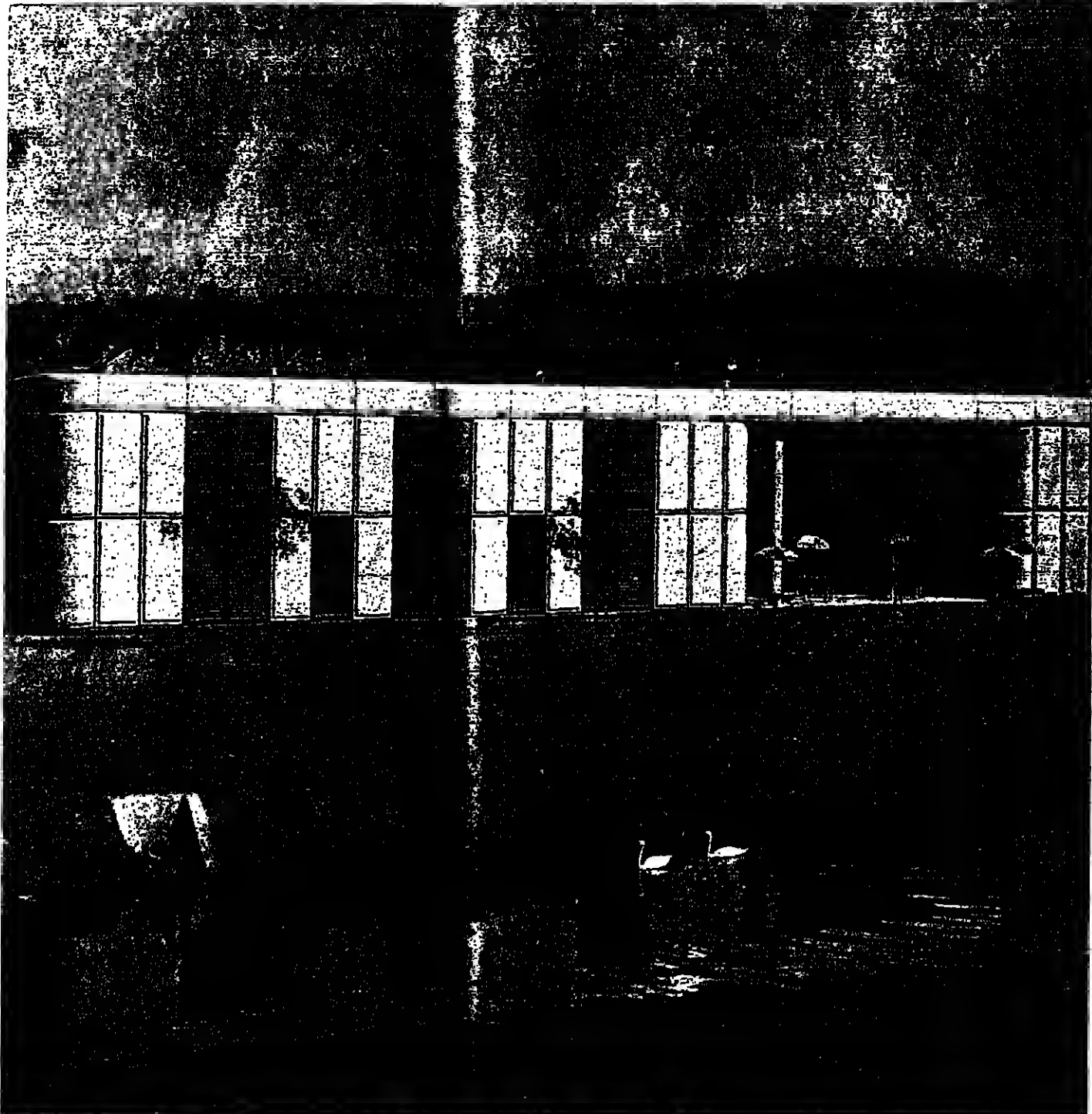
THE WINNER

New Furniture Factory for Herman Miller Ltd., Bath

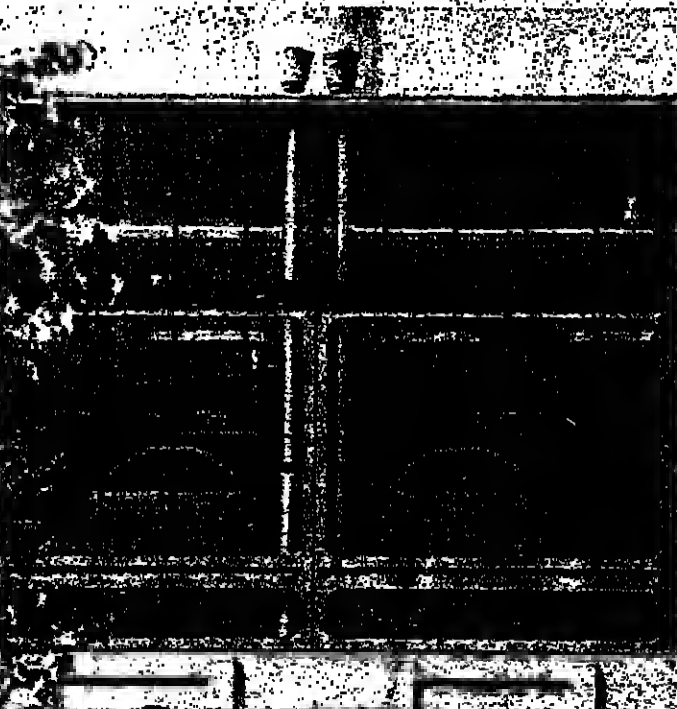
An industrial building which is capable of responding to the wide variety of demands by the client and also breaks new ground by providing better amenities and greater involvement for the work people.

The building is situated on the River Avon at Bath but although it is in an Industrial Area, considerable importance was attached to the way in which the building fitted into its surroundings. The fibreglass panels are cream coloured to harmonise with the Bath Stone which is the predominant material in the City - the whole site has been tarfed and nine mature willow trees have been planted along the river bank. Fixed external tables and seating have been provided for sixty work people on the south side of the building where two courtyards open on to the river frontage.

DESIGNERS: Farrell/Grimshaw Partnership
QUANTITY SURVEYORS: Hanscomb Partnerships
STRUCTURAL ENGINEERS: Peter Brett Associates
SERVICE ENGINEERS: Ron Hurst Associates
BUILDER: Wiltshiers



New Furniture Factory for Herman Miller Ltd., Bath



New Main Boilerhouse, Oldham and District General Hospital,

COMMENDED

Truman Limited, The Brewery, London E. 1.

In 1972 Arup Associates were commissioned to design a building to accommodate new amenities, storage, offices, truck docks, tanker bays and engineering workshops within the brewery complex in Spitalfields, London.

The site, included two listed Georgian houses that have been retained and renovated to form an integral part of the development and enclose a new courtyard, with the listed frontage of the old stable buildings.

The brief led to a design solution in which the buildings and organisation closely relate to its historical surroundings, with industrial and amenity spaces grouped on the lower three floors with a brick podium. The three offices above are planned behind a mirror glass facade so reducing energy consumption and reflecting its surroundings.

The elevations of this brick podium form an extension to one of the historic buildings following original street lines and maintaining the scale of its surroundings. The office floors are stepped back from the street and the face of the brick podium to reduce further the scale of the building.

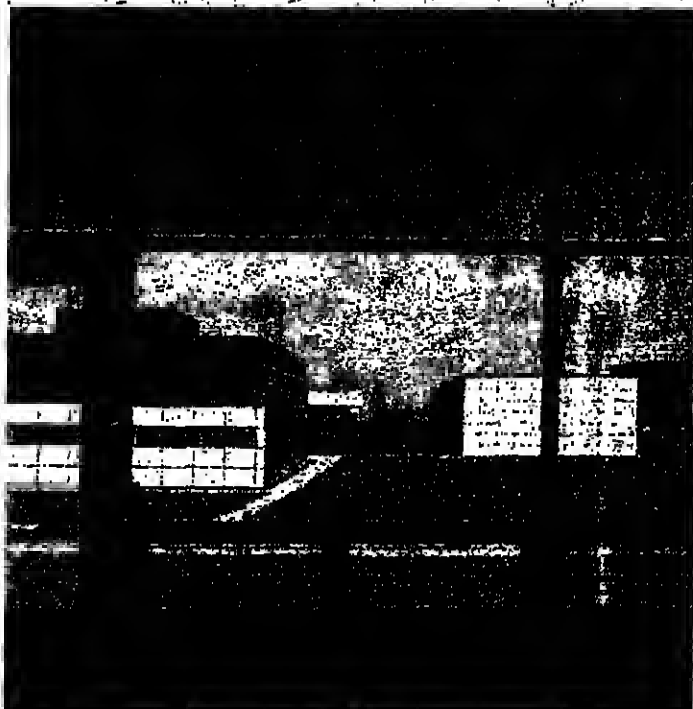
DESIGNERS: Arup Associates; Architects, Engineers & Quantity Surveyors, in association with Wakeman Trower & Partners, Quantity Surveyors
BUILDERS: Holland, Hannen & Cubitts

Excel House, Distribution Centre, Reading
McKay Securities Ltd.

Excel House comprises a large office and warehouse headquarters on an attractive river frontage.

The project was a speculative venture and therefore was not for any specific client requirement. The buildings represent the conversion of an existing group of buildings, the rear warehouse having been designed with a removable central roof area so that its use could change to offices/computer space or small scale light industry, at a later date. With the central roof area removed, a courtyard type of building would be created thus gaining daylight and aspect into the centre of the building.

DESIGNERS: Farrell/Grimshaw Partnership
QUANTITY SURVEYORS: Monk Dunstone Associates
STRUCTURAL ENGINEERS: Peter Brett Associates
BUILDERS: Caffin & Co.



Cottonvalley Sewage Treatment Works, Milton Keynes

Emgas Service Centre, Leicester

The project for the East Midlands Gas, comprises a customer service and communications centre, its function is to provide the necessary warehousing and back-up facilities in respect of installation and servicing of mains distribution and customer service for gas consumers in the Leicestershire regions. The complex includes its own vehicular maintenance, industrial and technical workshops.

One of the prime requirements in the thinking behind the proposed new Centre was the improvement of Customer Service. The location of management and operatives under one roof, planned to have good work flow and short communications between telephone bureau, work planning supervisors, operatives and stores, will lead to substantial improvement in efficiency in dealing with routine and emergency jobs.

No restrictions were placed on the development of the site by the planning authority other than the retention of a Victorian clocktower and gatehouse at the south-east corner of the entrance road and a finite landscaping scheme along the riverside.

DESIGNERS: Architects Design Group
QUANTITY SURVEYORS: Falton & Partners
STRUCTURAL CONSULTANTS: Ove Arup & Partners
MECHANICAL & ELECTRICAL CONSULTANTS: R. W. Gregory & Partners
MAIN CONTRACTOR: Shepherd Construction

Cottonvalley Sewage Treatment Works, Milton Keynes

Anglian Water Authority, Bedford Division

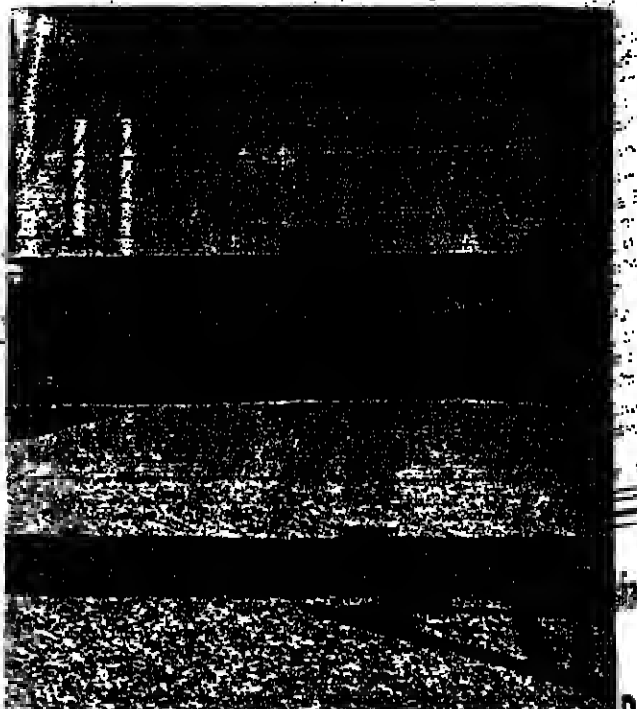
The Works is bounded by the M1 motorway, the River Ouzel, and city roads Portway and Tongwell Street. The Works plateau, is formed in gently undulating land protected by a flood bund on the north east, and eventually to be surrounded by forestry to the south and west.

The Water Authority set high standards for the effluent discharge, as the River Ouse is used for potable water abstraction downstream.

The superstructures fall into two categories - those housing plant and those providing the back-up for administration.



Truman Limited, The Brewery, London E. 1.



Emgas Service Centre, Leicester



Excel House, Distribution Centre, Reading

control and amenity. A 1.500M planning module controls form of the buildings, producing a structural module of 6.000M, either square or expanded in 1.500M increments. building heights are governed by a 1.000M vertical modular controlling grid realised in materials which allow easy change and performance requirements.

DESIGNERS: Milton Keynes Development Corporation
J. D. & D. M. Watson
CONSULTING ENGINEERS: J. D. & D. M. Watson
BUILDER: Bovis Civil Engineering

New Main Boilerhouse, Oldham and District General Hospital, The North West Regional Health Authority

The existing hospital is a largely Victorian fabric which is to be replaced by new building over the next few years and is planned to avoid interruption of service to the public and to guarantee the continuation of all plant services of rebuilding, in particular the supply of steam for space heating, medical functions, laundry service and cooking.

The site of the new boiler house was formerly covered by series of reservoirs which served a spinning mill. It is on a main road junction in an area where the mill town landscape is being replaced by a mixed urban landscape of houses, shopping centres and light industry. The very close relationship of the boiler house to the hospital complex required a building form of simple, interesting shapes and modest scale.

DESIGNERS: Taylor Young & Partners in association with Regional Architect, NWRHA
QUANTITY SURVEYORS: Frank Hyams & Partners
MECHANICAL & ELECTRICAL ENGINEERING CONSULTANTS: R. W. Gregory & Partners
STRUCTURAL ENGINEERING CONSULTANTS: Cooper and Ross
BUILDER: P. Bracegirdle

Photographs by John P.

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AVANA GROUP LIMITED

INTERIM STATEMENT

Unaudited results—26 weeks ended 1st October, 1977.

	26 weeks ended 1.10.1977 £'000	27 weeks ended 2.10.1976 £'000	53 weeks ended 2.4.1977 £'000
SALES (less inter-company transactions)	13,692	10,856	23,693
GROUP PROFIT—subject to depreciation and taxation	1,038	839	2,197
GROUP PROFIT—subject to taxation	769	574	1,704
CORPORATION TAX—at 52% (52%)	400	296	877
DIVIDENDS:			
Interim	102	92	107
(5p per share)	(.45p per share)	(.45p per share)	(.45p per share)
Final	107	107	107
(8.25p per share)	(8.25p per share)	(8.25p per share)	(8.25p per share)
SHARE AND CAPITAL RESERVES:			
Issued Ordinary	1,023	1,023	1,023
Issued Preference	150	150	150
Capital Reserves	2,531	2,531	2,531
Revenue Reserves	1,932	1,189	1,665
	5,636	4,873	5,369

The Group's performance continues to improve and reflects the benefits from past years' expenditure on plant modernisation and product development.

The policy of giving good value for money has provided the strong basis for the improving level of both sales volume and of profitability. This policy is being pursued by continual up-dating of plant and production methods and new product developments. There is considerable profit potential still to be obtained from past capital investment and the full benefits will be enjoyed over the coming months.

The net profit increase of £195,000 has been obtained from sales which have increased by 36% with a significant part of the increase coming from higher volume sales in spite of a not very favourable summer.

These results have borne the cost of the industrial action by the Bakers' Union which recently affected both the Cardiff and Rotherstone bakeries. We were embroiled in a dispute of which we had no part and whose outcome we could not influence. The lesson to be learned from this incident seems to be that even those companies, such as ours, with an unblemished record of good industrial relations, need to improve constantly the level of communications with their staff.

The period of stability we have enjoyed in the value of sterling has been an advantage in controlling raw material costs but we have had to meet higher prices in several areas—notably coffee, cocoa, fruit and meat. There have also been increases brought about by the E.E.C.'s agricultural policy which are especially hard to accept in the context of the world supply situation.

Our overseas efforts are making good progress, and exports are building up in a most encouraging manner.

It is the Board's intention to continue the present well proved policies whilst seeking actively other areas which are complementary to existing interests and which would provide bases for expansion which would not dilute the present level of earnings.

The Board proposes to pay an interim ordinary dividend of 5p per share on 3rd January, 1978 to all shareholders on the register on 28th November, 1977. The share registers will be closed from 28th November, 1977 to 5th December, 1977.

Avana Buildings, Fenbyris Street, Cardiff. By order of the Board, T. H. J. BARRETT, Secretary, 31st October, 1977.

APPOINTMENTS

Board re-organised at International Stores

Mr. Leslie Green, previously joint managing director, has been made deputy chairman of INTERNATIONAL STORES. Mr. Michael Groves, marketing director since 1975, becomes joint managing director with overall responsibility for buying, marketing and retailing. Mr. Gordon Latham, who joined International in 1974, continues as joint managing director, retaining overall responsibility for finance, personnel, services and property, and architects. Mr. Harold Beekin, trading director, becomes services director with wide responsibilities including architects, distribution, management services and administrative services. Mr. Alex Thomson, buying controller, joins the Board as buying director. Three directors retain their present responsibilities. Mr. Robert Mitr, retelling; Mr. Norman Mills, personnel; and Mr. Richard Horn, property.

Mr. John Abbott has been appointed managing director of AIRFLX PRODUCTS in succession to Mr. John Gray, who has relinquished that post to concentrate on his activities as chief executive of the toy division. Mr. Abbott joins Airflx from International Sports Company, part of the Dunlop Group, where he was marketing director and general manager of five operating companies, including Slazengers.

Mr. Charles Burkin, at present assistant general manager (international), Midland Bank, has been appointed chief executive of UBAF from December 1. He succeeds Mr. Walter Cronk, who has retired. UBAF is a London consortium bank established in 1972 by Union de Banques Arabes et Francaises.

Libran Arab Foreign Bank and Midland Bank. Howard Machinery has announced the appointment of Mr. A. McL. Morrison as chairman of HOWARD HARVESTORE, their subsidiary company jointly held with A. O. Smith Corporation of the U.S.

Mr. Herbert Clarke has retired as a director of RUMID QUALCAST and as chairman of the heating division after 48 years with the group. Mr. Clarke becomes services director with wide responsibilities including architects, distribution, management services and administrative services. Mr. Alex Thomson, buying controller, joins the Board as buying director. Three directors retain their present responsibilities. Mr. Robert Mitr, retelling; Mr. Norman Mills, personnel; and Mr. Richard Horn, property.

Mr. Douglas Gray, who has been appointed a director of CHROMOWORKS has been working manager since 1976. Mr. F. J. Hatcher has been appointed a director of ATCOST (MIDLANDS). He has been general manager for the past 10 years.

THE MERSEY DOCKS AND HARBOUR COMPANY has appointed Mr. Ken Gorrie as manager with special duties in the operations division, reporting directly to the operations director, Sir Peter Austin. Mr. Gorrie, who has been general cargo manager of the company for the last two years, has been a stevedoring specialist on the river for 29 years.

Sir Peter Matthews has been appointed a non-executive director of PEGLER-BATESLEY. Sir Peter is managing director of Vickers and holds a number of directorships which include Lloyds Bank and British Electric Traction. He is a vice-president

of the Engineering Employers Federation.

Mr. J. L. King has been appointed to the Board of the NINETEEN TWENTY-EIGHT INVESTMENT TRUST.

Mr. K. S. Azford, chairman and managing director of North Cornwall Tractors has become president of the British Agricultural and Garden Machinery Association.

Mr. R. Blackburn has been appointed to the Board of SOMIC.

Mr. Roger H. Buisser, managing director of Alton and Company (Whessoe Group) has been elected chairman of the British National Committee of the WORLD ENERGY CONFERENCE, succeeding Sir John Hill, chairman of the United Kingdom Atomic Energy Authority.

Mr. M. C. Whitley has been appointed financial director of REDFEAR NATIONAL GLASS in addition to his position as company secretary.

Mr. Don Clarke has become financial director of HERMCREST.

Mr. W. A. Simpson has been appointed managing director of GEORGE WIMPEY M E and C following the death of Mr. John Anderson. Mr. Simpson joined the company in 1952 and has been a director since 1959. He is also a member of the Board of Management of George Wimpey and Company.

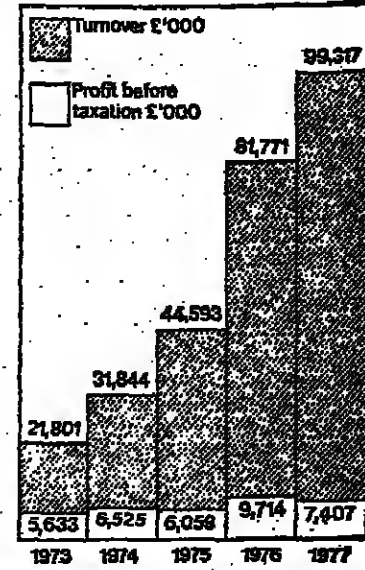
Sheikh Najib Alamuddin has, for family reasons, resigned the chairmanship of MIDDLE EAST AIRLINES and also from the

NATIONWIDE GROWTH CONTINUES

Financial Highlights for year ended 30th June 1977

	1977	1976
Turnover	£1000	£1000
Profit before taxation	99,317	81,771
Profit after taxation	7,467	9,714
Earnings per share	24.9p	31.4p
Dividend cover	3.4	4.9

- The group built and sold 3,251 houses, being 21% more than in the previous year in spite of the economic blizzard which has devastated the housebuilding industry generally.
- Other sectors also made good progress with £4m added to the rent roll of our investment portfolio and contracting activities expanded satisfactorily.
- Liquidity continues to be strong with over £18m of unused facilities with major clearing banks.
- A final dividend of 4.9p is proposed making a total of 7.3p for the year, being the maximum allowed under present legislation.
- Confidence in the future is supported by a three year land bank and a strong forward order book in all sectors.



Barratt Developments Limited

Copies of the Report and Accounts may be obtained from The Secretary, Wingrove House, Postleland Road, Newcastle upon Tyne NE5 3DP.

Board. Sheikh Najib has been elected lifetime honorary chairman and remains an adviser to the company. The Board will meet on December 2 to elect a new chairman.

Mr. Jeffrey Bernhard, managing director of the Bernhard Group, has been appointed president of the HORTICULTURAL TRADES ASSOCIATION.

Mr. R. Douglas has been appointed continuous mill cold-

finishing executive of TI Weldless. Mr. C. J. Martin has become U.K. sales executive of TI Desford Tubes. Both concerns are members of the Tube Investments group.

Mr. Ken Thomas has been appointed a full Board director of GILSPUR BULLENS TRANS-PORT SERVICES and continues as regional director for the North of England and the Midlands.

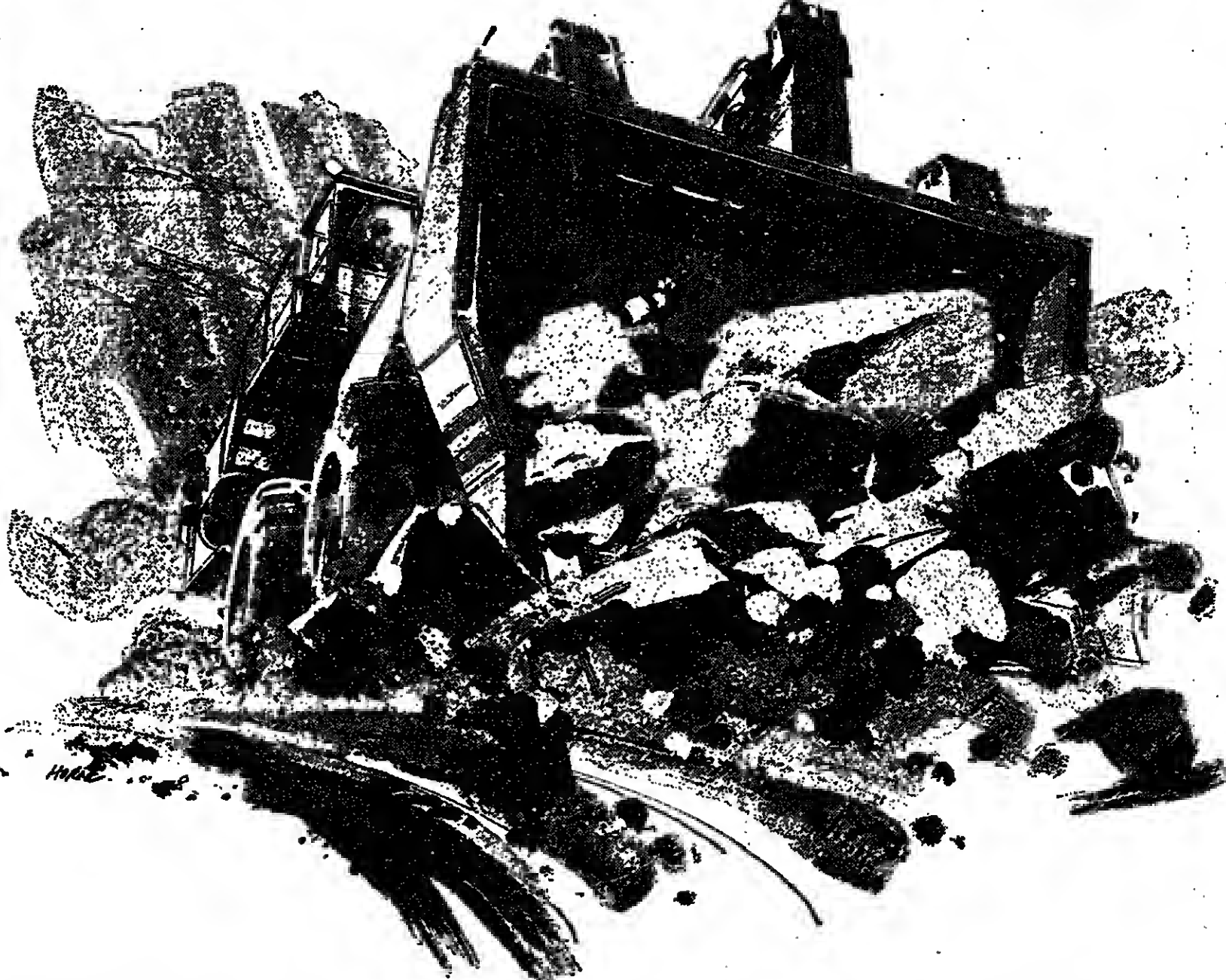
Sir Richard Powell, a former

director-general of the Institute of Directors, has joined the Board of the F. ENGLISH GROUP. Sir Richard is also a director of Bovis Piersen, Holding and Piersen (U.K.), and other companies.

Mr. Trevor Bedford has been appointed a director and general manager of the HONGKONG LAND COMPANY.

Dr. A. N. Ferrar has been appointed chief technical officer of TRANSPARENT PAPER

Gold Fields: one of Britain's natural resources.



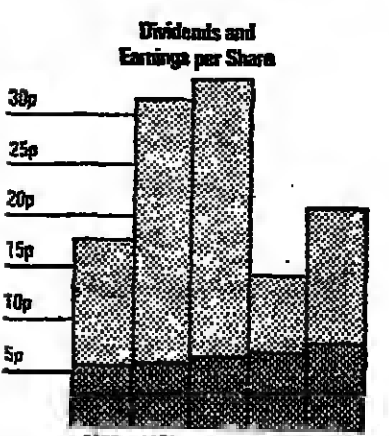
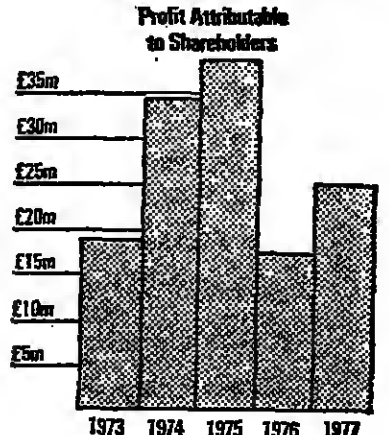
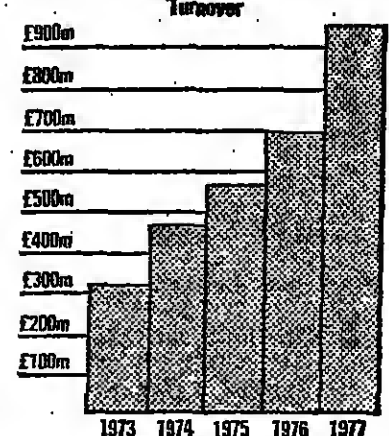
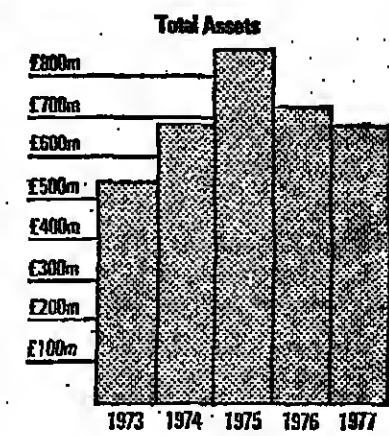
World industries and national economies depend on the efficient development of natural resources: metals, minerals and energy products.

This is the area in which Consolidated Gold Fields—a British company—specialises all over the world.

Company activities embrace steel production and distribution, construction materials, mobile plant, shipping, transport, engineering, manufacturing, trading, financial services and exploration. Its mining interests include gold, silver, coal, tin, iron ore, uranium, ilmenite, rutile, zircon, copper, zinc and vanadium.

As well as operating in the United Kingdom, Gold Fields has interests in Europe, North America, Africa, Australia, the Middle East and the Pacific.

Group companies are committed to a long term development programme to help meet future demands for natural resources essential to industry. By continuing to invest at home as well as overseas, Gold Fields is contributing to the British economy by providing employment and helping the balance of payments.



Italian International Bank

BASE RATE

Italian International Bank announce that, with effect from close of business on October 31st the base rate for lending will be reduced to 6%.

Italian International Bank Ltd.
P & O Building, Leadenhall Street, London EC3V 4PT
Tel: 01-623 8700 Telex 885370 (General)

SECOND CITY 50% INCREASE IN DIVIDEND.

Chairman Geoffrey L. Joberns reports that despite a difficult year for the building and construction industry in general, Second City maintains turnover at £14 million.

Operating profit before taxation was £902,559.

The paid dividend increased by 50% to £208,723 equivalent to 1.726p per share.

Reserves increased by £1m to a record of £4,969,854.

SECOND CITY Properties Limited

Copies of the Report and Accounts can be obtained from the Secretary at Oxford Street, Bilton, West Midlands.

DOLLAR LAND REPORTS PROGRESS

Judgment has been given in New York in relation to the contract for the sale of the Group's three U.S. properties. Completion of the sale has been ordered for 1st November 1977. The purchase price is to be \$27,515,033. Of this some \$4.2m. comes to the vendor companies. The remainder is represented by the assumption of the mortgages by the buyer. The \$4.2m. is subject to pre- and post-completion adjustments and will be received largely in the form of a five-year purchase-money mortgage.

The English company and the Canadian subsidiary are seeking compensation from the shareholders who sought to have the contract declared invalid.

The Group retains the Montreal property which produces net revenue of Can.\$235,000 per annum.

In his circular to Shareholders dated 28th October 1977 the Chairman stated:—

"It is fair to say that what has occurred in the last year represents a significant advance in the search for a solution of the troubles of the Group. It would be quite wrong, however, to claim that the present situation represents more than a stage from which further progress must be sought."

Salient features of the 1977 Accounts

	1977	1976
	£million	£million
Profit before taxation and exceptional items	57.2	47.7
Taxation	16.1	20.3
Net profit attributable to the members of Consolidated Gold Fields Limited	25.0	17.6
Per Ordinary Share	20.84p	14.62p
Ordinary Dividend		
Cost to the Company	9.9	8.9
Per Share payable	8.2317p	7.37p
Gross equivalent including related tax credit	12.4723p	11.3385p
Total Assets	683	734

Certain figures for 1976 have been restated to reflect current accounting policies.

The Secretary, Consolidated Gold Fields Limited, 49 Moorgate, London EC2R 6BQ.

Please send me a copy of the 1977 Annual Report.

Name _____

Address _____

Gold Fields

This advertisement is issued in compliance with the requirements of the Council of The Stock Exchange. It is not an invitation to subscribe for or purchase any securities.

ASSAM FRONTIER TEA HOLDINGS LIMITED

(the Company) Incorporated under the Companies Acts 1948 to 1967

Table with columns: Authorised £, Issued or to be issued or credited as fully paid £, Preferred Stock, Ordinary Stock.

All the securities of the Company have been admitted by the Council of The Stock Exchange to the Official List.

Particulars relating to the Company and its securities are available in the Extel Statistical Services and copies of these particulars may be obtained during usual business hours (Saturdays excepted) between 31st October and 14th November, 1977, both dates inclusive, from:

Herbert Smith & Co. 62 London Wall, London EC2R 7JP. Hoare Govett Limited, Atlas House, 1 King Street, London EC2V 8DU.

31st October, 1977

INTERNATIONAL COMPANY NEWS

CONDOTTE D'ACQUA

Sale to U.S. banks vetoed

ROME, Oct. 30. BACKING DOWN to strong parent company, the giant Stale trade union pressure, the Italian Prime Minister, Sig. Giulio Andreotti, has vetoed the sale of the State-controlled civil engineering company, Condotte D'Acqua, to a consortium of Texan banks grouped together by the former U.S. Treasury Secretary, Mr. John Connally. The veto came only 24 hours before the arrival here today of the U.S. Treasury Secretary, Mr. Michael Blumenthal and there is now concern that the Prime Minister's decision could discourage American banks and major companies from making fresh investments in Italy. Italy's main Trade Union Confederation had earlier threatened an all-out confrontation against the Government breaking a valuable six-month-old Government-Union truce should the sale be approved. Both the Condotte

U.S. car plant closures

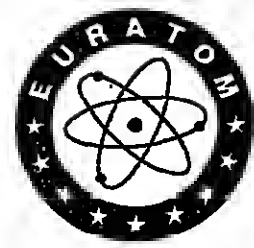
NEW YORK, Oct. 30. SALES bottlenecks at the start of the new model year have prompted surprise shut-downs by Chrysler and American Motors. The United States two smallest car companies. Chrysler's closure for a week beginning November 7 of its

Herstatt chiefs charged

MORE THAN three years after the collapse of Bankhaus Herstatt with losses of some DM1.2bn., official charges have been brought against eight people involved in the Bank's operations. The charges include currency speculation to the prejudice of customers' interests, balance sheet falsification and misleading both private individuals and firms as to the Bank's solvency. Leading figures named in Cologne by the Public Prosecutor's office are the former head of the Bank, Hans D. Herstatt, the Chief Representative Count Bernhard Von Der Goltz, the Head of the Foreign Department, Herr Heinz Bedderich, and the Chief Foreign Exchange dealer, Herr Dany Daitel.

New Issue All of these bonds having been sold, this announcement appears as a matter of record only. October 27, 1977

European Atomic Energy Community (EURATOM)



DM 200,000,000

5% % Bearer Bonds of 1977/1987

Interest rate: 5% p. a., payable annually on November 1 of each year. Issue price: 99 1/4 %.

Large table listing various banks and their participation in the EURATOM bond issue. Columns include bank names and their respective shares.

BARCLAYS BANK INTERNATIONAL LIMITED

8 1/2% CAPITAL BONDS 1986 NOTICE IS HEREBY GIVEN in satisfaction of the obligations imposed by Condition 5 (A) of the Terms and Conditions attached to the Bonds, the Bonds bearing the serial numbers listed below have been drawn in manner approved by the Trustee for redemption on 1st December 1977 at their principal amount.

Table listing serial numbers for the redemption of Barclays Bank International Limited 8 1/2% Capital Bonds 1986.

The Bonds drawn for redemption will become due and payable at their principal amount on 1st December 1977. Payment of the Bonds drawn will be made upon presentation and surrender of such Bonds with Coupon No. 7 and Security Coupons attached at the office of one of the Paying Agents or at the holders' option at Barclays Bank Limited, Security Services Department, 54 Lombard Street, London E.C.3. Coupon No. 6 (due 1st December 1977) should be detached and cashed in the usual manner. Interest on the Bonds drawn will cease on and after the 1st December 1977.

Cheltenham & Gloucester Building Society

Notice is hereby given in accordance with the Rules of the Society that as from 1st November 1977 the rates of interest payable by the Society on investments and savings will be as follows:-

Table showing interest rates for various investment products: Investment Shares (6.00% NET, 9.00% GROSS), Savings Builder (7.25%), Personal Deposit Accounts (5.75%), 3 Year Term Shares, Existing Accounts, High Rate Term Shares, 2 Year Term Shares, SAYE, and SAYE.

For leaflets with full details of all our investment schemes please apply to any of the Society's 78 Branches or to: Chief Office, Cheltenham House, Clarence Street, Cheltenham GL50 3JR.

Cheltenham & Gloucester ASSETS EXCEED £450 MILLION.

This announcement appears as a matter of record only.

\$150,000,000

Republic of Venezuela

\$100,000,000 Seven Year 8 1/8% Notes Due 1984

\$50,000,000 Fifteen Year 8 3/4% Notes Due 1992

Interest payable April 15 and October 15

MORGAN STANLEY & CO.

THE FIRST BOSTON CORPORATION

SALOMON BROTHERS

- List of banks and financial institutions including KUHN LOEB & CO., GOLDMAN, SACHS & CO., MERRILL LYNCH, PIERCE, FENNER & SMITH, etc.

ULTRAFIN INTERNATIONAL CORPORATION

October 31, 1977.

These securities having been sold, this announcement appears as a matter of record only.

NEW ISSUE

SEPTEMBER, 1977



Banque Nationale d'Algérie

US \$30,000,000

Floating Rate Notes due 1982

Issue price 100 per cent.

- List of banks and financial institutions including Kuwait Investment Company (S.A.K.), Banque Nationale de Paris, etc.

- Abu Dhabi Investment Company, Alahli Bank of Kuwait (K.S.C.), Algemene Bank Nederland N.V., etc.

- Credito Italiano (Underwriters) S.A., Dai-ichi Kangyo Bank Nederland N.V., DG BANK Deutsche Genossenschaftsbank, etc.

All of these Securities have been sold. This announcement appears as a matter of record only.

\$60,000,000



SOCIETE GENERALE

Floating Rate Notes Due 1984

SOCIETE GENERALE

MORGAN STANLEY INTERNATIONAL

- List of banks and financial institutions including AMSTERDAM-ROTTERDAM BANK N.V., CREDITANSTALT-BANKVERBIN, DEUTSCHE BANK, etc.

October 31, 1977.

Southern Malayan Tin Dredging (M) Berhad. This advertisement is issued in compliance with the requirements of the Council of The Stock Exchange in London. It is not an invitation to any person to subscribe for or purchase any shares.

Southern Kinta Consolidated (M) Berhad. This advertisement is issued in compliance with the requirements of the Council of The Stock Exchange in London. It is not an invitation to any person to subscribe for or purchase any shares.

AUTHORISED UNIT TRUSTS

OFFSHORE AND OVERSEAS FUNDS

Table of Authorised Unit Trusts listing various funds such as British Life Office, British Overseas, and others with their respective details and performance metrics.

Table of Offshore and Overseas Funds listing international investment vehicles like Fidelity, Keyes, and others, including their assets and investment focus.

Table with three columns: Index Limited 01-251 3466, Three months Tm 6775-6355, and CLIVE INVESTMENTS LIMITED.

Table titled CLIVE INVESTMENTS LIMITED providing details on Clive Fixed Interest Capital and Clive Fixed Interest Income.

Table titled CORAL INDEX: Close 508-513, showing insurance base rates for Cannon Assurance and other providers.

Table titled FINANCIAL TIMES STOCK INDICES showing various market indices such as All-Share, Industrial, and others.

Table titled HIGHS AND LOWS S.E. ACTIVITY showing high and low values for various stock categories.

Table titled FINANCIAL TIMES STOCK INDICES showing another set of market indices and their values.

Table titled HONG KONG SINGAPORE showing stock market data for these regions.

INSURANCE, PROPERTY, BONDS

Large table listing various insurance, property, and bond products from companies like Abbey Life, Albion, and others, including policy details and rates.

NOTES

Textual notes providing additional information and disclaimers regarding the financial data and insurance products.

Handwritten note: "كان ان الناص"

ALIS-Continued

Table of stock prices for various companies, including names like Anglo American, Anglo Coal, Anglo Petroleum, etc.

INSURANCE-Continued

Table of insurance company stock prices, including names like Anglo American Insurance, Anglo Coal Insurance, etc.

PROPERTY-Continued

Table of property-related stock prices, including names like Anglo American Property, Anglo Coal Property, etc.

INV. TRUSTS-Continued

Table of investment trust stock prices, including names like Anglo American Investment Trust, Anglo Coal Investment Trust, etc.

FINANCE, LAND-Continued

Table of finance and land-related stock prices, including names like Anglo American Finance, Anglo Coal Finance, etc.

Advertisement for SANWA BANK, Tokyo, Japan, with logo and contact information.

MINES-Continued

Table of mining company stock prices, including names like Anglo American Mines, Anglo Coal Mines, etc.

OVERSEAS TRADERS

Table of overseas trader stock prices, including names like Anglo American Overseas Traders, Anglo Coal Overseas Traders, etc.

RUBBERS AND SISALS

Table of rubber and sisal stock prices, including names like Anglo American Rubbers, Anglo Coal Rubbers, etc.

TEAS

Table of tea stock prices, including names like Anglo American Teas, Anglo Coal Teas, etc.

MINES CENTRAL RAND

Table of central rand mining stock prices, including names like Anglo American Central Rand, Anglo Coal Central Rand, etc.

EASTERN RAND

Table of eastern rand mining stock prices, including names like Anglo American Eastern Rand, Anglo Coal Eastern Rand, etc.

FAR WEST RAND

Table of far west rand mining stock prices, including names like Anglo American Far West Rand, Anglo Coal Far West Rand, etc.

FINANCE

Table of finance stock prices, including names like Anglo American Finance, Anglo Coal Finance, etc.

INSURANCE

Table of insurance stock prices, including names like Anglo American Insurance, Anglo Coal Insurance, etc.

PROPERTY

Table of property stock prices, including names like Anglo American Property, Anglo Coal Property, etc.

TOBACCO

Table of tobacco stock prices, including names like Anglo American Tobacco, Anglo Coal Tobacco, etc.

TRUSTS, FINANCE, LAND

Table of trusts, finance, and land stock prices, including names like Anglo American Trusts, Anglo Coal Trusts, etc.

DIAMOND AND PLATINUM

Table of diamond and platinum stock prices, including names like Anglo American Diamonds, Anglo Coal Diamonds, etc.

CENTRAL AFRICAN

Table of central african stock prices, including names like Anglo American Central African, Anglo Coal Central African, etc.

AUSTRALIAN

Table of Australian stock prices, including names like Anglo American Australian, Anglo Coal Australian, etc.

TINS

Table of tins stock prices, including names like Anglo American Tins, Anglo Coal Tins, etc.

COPPER

Table of copper stock prices, including names like Anglo American Copper, Anglo Coal Copper, etc.

MISCELLANEOUS

Table of miscellaneous stock prices, including names like Anglo American Miscellaneous, Anglo Coal Miscellaneous, etc.

NOTES

Notes section containing various financial notices and announcements.

REGIONAL MARKETS

Regional markets section providing information on local and regional stock exchanges.

OPTIONS 3-month Call Rates

Table of 3-month call option rates for various companies and markets.

